Perinatal psychological distress in the South African context:

The road to task shifting evidence based interventions

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DECLARATION

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

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ABSTRACT

Inadequate public health resources coupled with a chronically overburdened health system leave a large proportion of South Africans unable to access mental health care. Low-income pregnant women with common mental disorders (CMDs) are arguably more vulnerable to falling through the treatment gap, given the low rates of detection during pregnancy and the numerous additional barriers to care. The direct and indirect financial and personal costs associated with perinatal mental illness are substantial, while the high prevalence rates of perinatal CMDs make this an area in need of urgent attention. Integrating task shifting approaches into perinatal primary health care services is a promising solution. The first chapter introduces the thesis, providing context to the studies that are presented in later chapters and an overview of the research questions that informed them. The second chapter constitutes a systematic review of the literature relevant to the studies. Chapters 3 to 6 report on the findings of the studies, briefly described in the abstract below.

The prevalence and risk factors associated with perinatal psychological distress - a plausible precursor for common mental disorders (CMDs) - are not widely understood in under-resourced settings. The first study (Chapter 3) investigates the prevalence and predictors of psychological distress in the antenatal period. Data were collected from 664 pregnant women who reported for antenatal care to any one of 11 Midwife and Obstetric Units (MOU) across the greater Cape Town area. Psychological distress was measured using the Symptom Response Questionnaire (SRQ-20; cut-off value of 7/8), while data pertaining to risk factors were collected via a demographic questionnaire, the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) and the Multidimensional Scale of Perceived Social Support (MSPSS). The prevalence of antenatal psychological distress was 38.6%. Risk factors included low socio-economic status (SES) (OR = 1.45, 95% CI: 1.24-1.68); recent physical abuse and/or rape (OR = 1.94, 95% CI: 1.57-2.40); complications during a previous delivery (OR = 1.18, 95% CI: 1.01-1.38); having given birth before (OR = 1.61, 95% CI: 1.21-2.14). The high prevalence rate of psychological distress is consistent with those found in other South African studies of perinatal CMDs. Appropriate, context-specific, and effective interventions are better served by investigating a broader range of symptoms associated with perinatal CMDs in these settings.

The second study (Chapter 4) examines the mental health literacy (MHL) of pregnant women, including their perceptions of the causes of mental illness during pregnancy and best treatment

approaches. Understanding the factors that represent barriers to accessing care is important to the development of accessible interventions. Globally, low levels of mental health literacy have often been identified as one such treatment barrier. However, little is known about how pregnant women perceive and understand mental illness during this time, particularly in South Africa. A convenience sample of 262 pregnant women attending routine antenatal appointments at a Midwife and Obstetrics Unit (MOU) were recruited to participate in the study. Participants were presented with one of five possible vignettes, depicting a woman with perinatal mental illness, as defined by the DSM 5, including ante- and postnatal depression, panic disorder, substance dependence and schizophrenia. Participants were then asked to provide a diagnosis and completed two scales assessing aspects of mental health literacy. The results from this study showed that more than three quarters of respondents (77.4%) did not identify the signs and symptoms described in the vignettes as those consistent with mental illness. More than half of all participants (57.5%) were of the view that all the disorders depicted were "typical of a weak character", while stress was the most widely held explanation for symptoms of all disorders. Participants were most confident in the therapeutic potential of psychological services, especially consulting with a counsellor or social worker. These were closely followed by lifestyle and self-help options as the most endorsed means to addressing psychiatric symptoms during pregnancy. Notably, seeking help from a spiritual or religious advisor was comparably as popular among participants as seeking help from a psychologist or social worker. Given the elevated prevalence of perinatal mental illness, these findings are cause for concern. Developing socio-culturally nuanced understandings of how perinatal mental illness is perceived should be emphasized as central to the development of successful interventions.

The third study (Chapters 5 and 6) investigates the feasibility and acceptability of, as well as the preliminary responses to an adapted Problem Solving Therapy (PST) intervention to treat psychological distress. Given the large treatment gap that exists in public mental health, support for task shifting evidence based mental health treatments is growing. However, the gaps in our knowledge are threefold. First, most research has used lay counsellors to deliver interventions. No research has used Registered Counsellors (RC) to conduct interventions. Second, very little is known about the potential outcomes of task shifting an adapted PST intervention to reduce symptoms of psychological distress. Third, data regarding the feasibility and acceptability of such interventions in South African Midwife and Obstetric Units (MOUs) is very limited. Results from the study are presented in two chapters.

Chapter 5 focuses on the intervention participants. Thirty-eight women who screened positive for high CMD symptoms on the Edinburgh Postnatal Depression Scale (EPDS) at their first antenatal visit were recruited to participate in the intervention. Of these, 22 completed the pre- and post-intervention interviews. Using mixed methods, preliminary responses to the three-session PST intervention, as well as participants' perceptions of the intervention's feasibility and acceptability were explored. Primary outcomes included psychological distress as measured by the Symptom Response Questionnaire (SRQ-20) and CMD symptoms, as measured by the EPDS. A short semi-structured post-intervention interview was also conducted approximately three months after each participant's last session. On the primary outcome measures, significant reductions were seen on EPDS scores (z = -3.0, $p < 0.01$) as well as the SRQ-20 scores (z = -3.5, p = <0.01). Several significant reductions were also seen on secondary outcomes. Reductions in impairment to functioning were also noted, with all three Sheehan disability scales reflecting less disruption to work (z = -2.3, p = 0.02), social life (z = -3.3, $p < 0.01$), as well as family and home responsibilities (z = -2.5, p = 0.01). Perceived Stress Scale scores were also significantly reduced (z = -3.4, $p < 0.01$). Significant changes were seen on two problem-solving styles, with reduced 'negative problem orientation' scores (z = -3.1, $p < 0.01$) and 'avoidant style' scores (z = -3.0, $p < 0.01$) Participants felt that the intervention was feasible and acceptable. The intervention's acceptability lay primarily in the opportunity for participants to talk confidentially to a non-judgmental and empathic person about their problems. The intervention materials seemed to serve as an extension of the therapeutic process. Factors that were identified by participants as representing potential barriers to the intervention included lack of transport or money, work commitments and stigma.

Chapter 6 explores the intervention's feasibility and acceptability from the perspectives of 6 stakeholders who were involved with the project. Semi-structured interviews were conducted with each stakeholder. Data from the interviews showed that the stakeholders felt that the intervention was helpful to patients and a valuable resource for the facility to have. Some expressed concern about how stigma associated with mental illness might be a barrier to patients who need mental health care. To the staff, the project's value seemed to lie primarily in the support it provided in managing emotionally distressed patients. Having a resource to refer patients to appeared to provide overburdened staff with some relief. None of the stakeholders reported that the screening and referral procedures added to their workload. Some stakeholders felt detection of psychological problems among patients was compromised

without mental health screening. Staff felt that a walk-in counselling service would serve to improve future interventions.

Limitations to the first study included its cross-sectional design and use of a screening tool to measure the prevalence of psychological distress. The second study was limited by the employment of vignettes to collect data. While they are useful tools to elicit population-specific responses, their adaption for those purposes means that they are not standardised. The study was further limited by the use of a convenience sample. Finally, the third study was limited by a small sample size owing to low retention rates. However, low retention rates are not uncommon among antenatal and low-income populations, where structural barriers to accessing care are often more pronounced. The lack of a comparison group was an additional limitation.

In conclusion, data from this study support task shifting evidence based treatments to Registered Counsellors to treat the highly prevalent antenatal psychological distress. Difficulties distinguishing CMD symptoms from normal pregnancy experiences may influence the uptake of counselling services and represent a barrier to care. Improving mental health literacy may be a necessary supplement to future interventions. Future research should focus on evaluating real-world models of integrated mental health in primary care settings. How psycho-education programmes might impact upon the uptake of services at antenatal care facilities will also contribute to broadening our knowledge of developing effective and appropriate interventions.

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I understand that the privilege of my education comes with great responsibility and I undertake to always do my best to live up to that responsibility, using my skills and knowledge to contribute to the development of a more equal society for all South Africans.

This thesis incorporates work reported in the following papers:

i. Spedding, M.F., Stein, D.J. & Sorsdahl, K.R. (2015). Task shifting psychosocial interventions in public mental health: A review of the evidence in the South African context. In A. Padarath, J. King, R. English (Eds.). *South African Health Review 2014/2015*. Durban: Health Systems Trust; p.73-87

ii. Spedding, M.F., Stein, D.J. & Sorsdahl, K.R. (2017). Africa. In: Hoffmann, S. (ed). Clinical Psychology Across the Globe. Springer (in press).

iii. Spedding, M.F., Sorsdahl, K.R., Parry, C.D.H., Mathews, C., Stein, D.J., & Petal Petersen Williams (2016). Psychological distress during pregnancy: Prevalence and risk factors in a South African sample. *Archives of Women's Mental Health* (submitted).

iv. Spedding, M.F., Stein, D.J. & Sorsdahl, K.R. (2017). Mental health literacy among pregnant women in the Western Cape, South Africa.

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CHAPTER 1

INTRODUCTION

1.1 Context

Globally, the burden of disease is shifting from one defined by premature death to one defined by disability (WHO, 2011). With an ageing world population, non-communicable diseases, including mental and substance use disorders, have become the leading causes of disability worldwide, and the third leading cause of disability in South Africa (Charlson, Diminic, Lund, Degenhardt, & Whiteford, 2014). Findings from the South African Stress and Health study (SASH) (Williams et al., 2008) yielded a 12 month prevalence rate of 16.5% for common mental disorders (CMDs) among South Africans, and a lifetime prevalence of 30.3% (Herman et al., 2009), with significant economic implications to bear. Nationally, mental disorders account for an average of 23.6 days spent 'out of role'; days when people are unable to work or carry out usual daily activities due to mental illness (Mall et al., 2014). The loss of income for South African individuals living with such disorders has been calculated at US$4,798 annually, amounting to a total annual cost of US$3.6 billion in lost income (Lund, Myer, Stein, Williams, & Flisher, 2012).

1.1.1 Background

Low-income women in the perinatal period are arguably the hardest hit by the direct and indirect costs of mental health problems. Marginalised by the intersecting socio-economic factors of both poverty and gender, low-income women are particularly vulnerable to psychological distress (Vikram Patel, Araya, de Lima, Ludermir, & Todd, 1999). This is seen in several ways. First, there is substantial evidence showing the association between poor mental health and poverty (Kuruvilla & Jacob, 2007; Lund, Breen, et al., 2010). Approximately 45% of South Africans live on less than US$2 per day, an improvement since social grants were introduced in the 1990s (Mayosi & Benatar, 2014). Second, in South Africa, despite a decrease in general poverty rates since 2000, on average women remain up to 30% poorer than men (Posel & Rogan, 2012), while female-headed households are 50% more likely to be income-poor than male-headed households (Rogan, 2016). With 38% of all South African households headed by women alone (Bower, 2014) the psychosocial impact of poverty, for a

substantial proportion of South African women and children, is likely to be profound. Third, Wilkinson & Pickett (2010) have argued that – more than absolute poverty – relative poverty, in the form of income and social inequality, are responsible for high prevalence rates of mental illness and substance abuse. At 63.38, South Africa has the highest Gini index[1], making it the most unequal country in the world (World Bank, 2015). Fourth, differences in gender socialisation are thought to explain why women are more likely than men to develop 'internalising' disorders such as depression and anxiety (Rosenfield & Mouzon, 2013). Indeed, in support of this, the SASH study found that women are almost twice as likely as men to develop a mood disorder, while being female was also a strong predictor of anxiety (Herman et al., 2009). Women's vulnerability to mental health problems is only amplified further during the perinatal period (Di Florio et al., 2013). With prevalence rates of at least 21% during pregnancy (Brittain et al., 2015) and up to 35% postnatally (Cooper et al., 1999), low-income South African women are at high risk for the development of CMDs such as depression. Given the disabling effects of CMDs, the economic implications for women and their families are grave, potentially perpetuating a cycle of poverty.

South African health care expenditure reflects the country's profound socio-economic inequalities, where public health expenditure of US$150 per capita serves 84% of the population, while private expenditure is ten times as much serving only 16% of South Africans (Benatar, 2013). In 2012, 8.8% of the GDP was allocated to total health expenditure, below the global average of 9.2% (Mcintyre, Doherty, & Ataguba, 2014). With only US$59 million of the South African state budget dedicated to mental health services, the ratio of 0.32 psychologists and 0.28 psychiatrists for every 100 000 people (Lund, Kleintjes, Kakuma, & Flisher, 2010b) generates a substantial treatment gap. Those unable to access private care suffer yet another blow: a 75% probability that they will not receive the professional attention they require (Williams et al., 2008). Inadequate public health resources coupled with a chronically overburdened health system means that most South Africans have limited access to mental health care. Task shifting psychosocial interventions from specialised to non-specialist health workers (NSHW) to treat CMDs at primary health care level has been widely proposed as a strategy for expanding access to equitable mental health care. Restructuring the existing health

[1] According to the World Bank (2015), the Gini index "measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution… a Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality"

system to accommodate an integrated mental health service at primary health care level might be the only way to achieve this.

1.1.2 South African mental health policy

South Africa is one of only 19 African countries to have an officially endorsed and dedicated mental health policy (WHO, 2011). Consistent with the WHO's recommendations, South African mental health policy is dedicated to the provision of a comprehensive, community-based service that is integrated into general health care (Department of Health, 1997). The Mental Health Care Act (2002), which was promulgated in late 2004, was not only in keeping with international human rights standards, but incorporated the means by which services could be decentralised; mental health could be integrated into general health care; and, community-based care could be developed (Lund, Kleintjes, Kakuma, & Flisher, 2010a). More recently, the National Mental Health Policy Framework and Strategic Plan 2013-2020 (MHPF) (Department of Health, 2013) acknowledged the ongoing challenges within mental health, including the under-funding of mental health; inequity of services between provinces; widespread stigma against those with mental illness; a lack of accurate routinely collected data regarding service delivery; overreliance on psychiatric hospitals; and, under-utilisation of primary health care (PHC) services to deliver care to those with depression and anxiety disorders, and not just manage the medication of those with severe mental illness.

In light of these challenges to date, the MHPF asserts the following as its mission:

> From infancy to old age, the mental health and well-being of all South Africans will be enabled, through the provision of evidence-based, affordable and effective promotion, prevention, treatment and rehabilitation interventions. In partnerships between providers, users, carers and communities, the human rights of people with mental illness will be upheld; they will be provided with care and support; and they will be integrated into normal community life. (Department of Health, 2013, p. 19)

In alignment with the WHO framework (Stein, 2014), the MHPF seeks to achieve this mission with eight primary objectives: scaling up decentralized integrated primary mental health services; increasing public awareness; promoting mental health through collaboration with other sectors; empowering local communities to participate in promoting mental well-being; protecting the human rights of people living with mental illness; adopting a multi-sectoral approach to dealing with poverty; establishing a monitoring and evaluation system; and, ensuring that mental health services are evidence-based. Importantly, and of particular

relevance to this thesis, it identifies the expansion of human resources and the use of a task shifting approach to develop the mental health workforce as areas to be actioned by 2015 (Department of Health, 2013).

In particular, the MHPF envisions specialist mental health teams that are mandated to oversee the delivery of evidence-based psychosocial interventions that are task-shifted to trained NSHWs at primary health care and community levels, focused on: medication monitoring and psychosocial rehabilitation; detection, management and referral of depressive and anxiety disorders; detection, management, and referral of childhood and adolescent disorders; and, routine screening, management and referral of perinatal mental illness. The exact composition of the specialist teams, as well as the cadres of workers that might be utilised to deliver task shifted interventions are not made explicit (Department of Health, 2013). However, current resources and structures are likely to be inadequate to accommodate these ideals.

1.1.3 The gap in existing mental health services

Currently, mental health services, including psychosocial treatments, are mostly accessible to those who are wealthy and insured (via the private sector) or those who have severe symptoms of mental illness, such as psychosis (primarily at tertiary public health facilities) (Petersen & Lund, 2011). Once people with serious mental disorders have been discharged from tertiary care, services at PHC level are largely limited to the dispensing of follow-up medication by nurses for the purposes of symptom management (Lund, Petersen, Kleintjes, & Bhana, 2012). This means that people who are generally mentally healthy who have experienced trauma or other forms of psychological distress resulting from life experiences or circumstances (or even those with less severe mental disorders), are unlikely to gain access to public mental health services, unless or until they become severely symptomatic or impaired. Consequently, mental health services are limited to a somewhat ‘back foot’ response; providing solely tertiary curative interventions to treat mental illnesses that are likely to be already quite advanced.

Schneider et al. (2016) accurately point out, “From an economic point of view, it costs South African society more not to treat mental disorder than to treat it” (p. 156). By extension, it may well cost South African society more to treat mental disorders than to prevent them or disrupt them nearer to the point of onset. To this end, dimensional definitions of mental illness are likely to be more useful to the conceptualisation of programmes that can target people who may be at risk for mental illness and who may (but do not necessarily) meet diagnostic criteria

for less severe, more common mental disorders. While the MHPF makes provision for primary level interventions that aim to promote mental health and prevent mental illness, exceptionally little has been done in this area. Women attending antenatal care at PHC facilities (known as Midwife and Obstetric Units or MOUs) are ideal candidates for integrated mental health interventions that are aimed at detecting and treating a broader range of CMD symptoms. Early intervention may prevent the aggravation of symptoms and mitigate psychosocial impairment.

1.2 Defining the research questions

In the last 15 to 20 years, a number of South African studies have investigated the prevalence rates and predictors of postnatal CMDs, primarily depression. Only within the last five years have researchers turned their attention to *antenatal* CMDs, again mostly focusing on depression. For example, Tomlinson et al. (2014) found that 37% of their community sample of 1145 pregnant women were possible cases of depression, based on a screening measure. Very few have sought to investigate broader, dimensional definitions of mental health problems. All samples were drawn from localised sites, such that results are difficult to generalise to broader populations. As a result, we know little about the prevalence of general *psychological distress* among pregnant women who present for antenatal care at PHCs in the Western Cape, or the associated risk and protective factors. Research question #1 seeks to address this gap.

Research question #1

What is the prevalence rate of psychological distress during pregnancy among women who receive antenatal care at primary health care centres, and what are the associated risk and protective factors?

Despite high prevalence rates of perinatal CMDs globally, several barriers to accessing mental health interventions and treatment exist. In addition to structural barriers, such as an under-resourced health care system, studies have also shown that poor mental health literacy (MHL) may also play a role (Jorm, 2012). Local studies have shown that South Africans frequently do not associate psychiatric symptoms with mental illness and usually ascribe symptoms to intrapsychic factors such as stress or lack of will-power (Bruwer et al., 2011; Hugo et al., 2003; Sorsdahl et al., 2010; Sorsdahl & Stein, 2010). Data from high income countries have shown that pregnant women often have difficulty differentiating CMD symptoms from the experience

of being pregnant (Bilszta, Ericksen, Buist, & Milgrom, 2010; Henshaw, Sabourin, & Warning, 2013; Highet, Gemmill, & Milgrom, 2011; Hübner-Liebermann, Hausner, & Wittmann, 2012). Given that MHL directly informs help-seeking behaviours, understanding more about the awareness that women have of perinatal CMDs, including their perceptions of causes and treatments, is central to the conceptualisation of interventions for this population. Very limited research has been conducted on MHL among pregnant women, even in high-income countries. South African studies of MHL are also limited, none of which have focused on perinatal women. As such, research question #2 addresses this gap.

Research question #2

What perceptions do pregnant women have of mental illness during the perinatal period, including their beliefs about causes and views on the most effective treatments?

Despite the adverse outcomes associated with perinatal mental illness, as little as five years ago, studies of psychosocial interventions aimed at reducing antenatal CMD symptoms were almost non-existent, even in high-income countries (Dennis, Ross, & Grigoriadis, 2010). More recently, there has been greater recognition of the need to develop interventions that commence during pregnancy to treat women who are screened as at-risk for perinatal CMDs (Rahman et al., 2013), but the evidence is still very limited. In part, this has been due to under-resourced mental health services, leaving many women who need services unable to access them.

Task shifting is widely endorsed as one possible solution to address barriers that contribute the treatment gap in mental health (Ritsuko Kakuma et al., 2011; Rebello, Marques, Gureje, & Pike, 2014). Using NSHW to deliver evidence-based psychosocial interventions in the treatment of CMDs will better ensure that those who require mental health services will have access to them (WHO, 2008). In this way, specialist services are also freed up to attend to more complex cases and become more involved in the development of programmes and interventions. To date there has been good evidence to support this approach to integrating mental health services into primary care in South African settings (Spedding, Stein, & Sorsdahl, 2015). However, nearly all interventions have made use of lay counsellors or community health workers (CHWs) to deliver interventions (see Cooper et al., 2009; le Roux et al., 2013; Myers, Stein, Mtukushe, & Sorsdahl, 2012; Pengpid, Peltzer, Skaal, & Van der Heever, 2013; Petersen, Bhana, & Baillie, 2012; Petersen, Hanass Hancock, Bhana, & Govender, 2014; Richter et al., 2014; Sorsdahl et al., 2014, 2015). While useful, these studies

simply show that some manualised, evidence-based therapies can be delivered by CHWs under the strict control and supervision of researchers. They do not reflect real-world implementation or integrated models where resources for training and supervision are scarce. Failure to expand the health care system to include more qualified mental health professionals magnifies the risk of providing diluted and substandard services to poor people. In this way, equitable care becomes profoundly compromised.

In conjunction with the Health Professions Council of South Africa (HPCSA), the national Department of Health developed a mid-level category of mental health care worker called the Registered Counsellor (RC). RCs hold a four-year degree that is designed to equip recipients with psychology-specific knowledge regarding theory and application, particularly for community and primary health care settings. The category was designed to enable specialists such as psychologists the capacity to shift tasks to less specialised professionals. However, since its introduction in 2003, no studies have investigated the utility of this category to deliver services in PHC settings.

Using evidence-based therapies to treat mental illness, particularly in the context of task shifting approaches, is widely endorsed. As an evidence-based therapy derived from cognitive behavioural therapy (CBT), problem-solving therapy (PST) has been shown be an effective intervention for reducing psychological distress and depression (Sorsdahl et al., 2014; van't Hof et al., 2011). However, to the best of our knowledge there have been no studies examining the feasibility or effectiveness of PST for reducing depression in the perinatal period. Research question #3 addressed these gaps.

Research question #3

Is a modified PST intervention to reduce symptoms of psychological distress among women presenting for antenatal care in primary health care settings, delivered by a Registered Counsellor, feasible and acceptable; and, what are the preliminary mental health outcomes of said intervention?

1.3 Research objectives

Based on the research questions that this thesis seeks to answer, several study objectives were developed. These objectives are as follows:

1) To review the literature on perinatal psychological distress and CMDs; mental health literacy during pregnancy; and task shifting interventions for the treatment of perinatal CMDs.
2) To investigate the prevalence rate of psychological distress during pregnancy among women who receive antenatal care at primary health care centres, as well as the associated risk and protective factors.
3) To examine the perceptions that pregnant women have of mental illness during the perinatal period, including their beliefs about causes and views on the most effective treatments.
4) To investigate the feasibility, acceptability and preliminary responses to a modified PST intervention to reduce psychological distress among women presenting for antenatal care in primary health care settings, delivered by a Registered Counsellor.

1.4 Thesis outline

To achieve its objectives, the thesis is structured as follows:

Chapter 2 comprises a review of the literature relevant to each of the research objectives. This review comprises a systematic review of the literature that guided the research described in all of the remaining chapters.

Chapters 3, 4, 5 and 6 each present a facet of the study. Chapter 3 seeks to answer the first research question by investigating the prevalence and predictors of psychological distress among pregnant women in the Western Cape. Chapter 4 responds to the second research question by seeking to understand the perceptions that pregnant women have of CMDs. Chapter 5 is concerned with the third research question and examines the patients' views of the feasibility and acceptability of a PST intervention delivered by a RC in a primary health care setting, as well as patients' preliminary responses to the treatment. Chapter 6 represents an extension of Chapter 5 as it too addresses the third research question, by exploring the intervention's feasibility and acceptability from various stakeholders and stakeholders perspectives. Descriptions of research methods, procedures and results pertaining to each study are detailed separately in the relevant chapters. The main findings will also be discussed, in addition to outlining the limitations and proposing future areas of inquiry.

Chapter 7 is the concluding chapter. Here, the main findings are synthesised to answer each of the three research questions. In addition, the implications for practice, training and policy development are also discussed. Recommendations for future research will also be made in the final chapter.

1.5 Ethics

Ethics approval for all studies reported on in this thesis was obtained from the Faculty of Health Sciences Research Ethics Committee (HREC) at the University of Cape Town. Permission to collect data at the MOUs was also obtained from the Western Cape Department of Health. Where relevant, matters relating to ethics that are particular to individual studies are described in more detail in the relevant methodology sections.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The previous chapter provided an introduction to the research questions that this dissertation seeks to address. The purpose of this chapter is provide a systematic review of the literature that informed the studies founded on those research questions. The literature reviewed in this chapter was procured via several methods: (1) literature searches on databases including Academic OneFile, Pubmed and Ebscohost (including Academic Search Premier, Africa-Wide Information, CINAHL, Health Source: Nursing/Academic Edition, MEDLINE, PsychARTICLES, PsychINFO, MasterFILE Premier); (2) drawing from the reference lists of relevant and topic-related articles; (3) consulting sources recommended by colleagues; and, (4) setting up topic notifications on various websites including Mendeley and ResearchGate to trigger email alerts when relevant data were published.

2.1.1 Chapter outline

This literature review will begin with an overview of mental disorders that most commonly occur during the perinatal period. After clarifying relevant terms, each section that follows will pose and address several questions to establish the existing and current knowledge in each area as well as the gaps therein. The first section concerns the prevalence of perinatal CMDs and addresses the following two questions: *what are the global and local prevalence rates of perinatal psychological distress and CMDs?* and, *what risk and protective factors have been found to be associated with perinatal mental illness?* The second section shifts the focus to mental health care and treatment, by addressing the following question: *what are the factors that represent barriers to care,* and *what role does mental health literacy play in the help-seeking of perinatal women. Also what perceptions do pregnant women have of perinatal mental illness?* The third section aims to address the ways in which the treatment gap might effectively be reduced, by answering several questions: *What evidence is there to support the use of task shifting in mental health? What is the RC category and what role might this cadre of mental health worker play? What role do evidence-based treatments play in task shifting interventions? How effective is Problem Solving Therapy (PST) as a task-shifted intervention for perinatal mental illness?*

2.2 Perinatal mental illness

The perinatal period of motherhood is widely recognised as a time of significant vulnerability to distress and as such, increased risk for mental illness (Blegen, Hummelvoll, & Severinsson, 2010; Evenson & Simon, 2005; O'Hara, 2009; Tannous, Gigante, Fuchs, & Busnello, 2008), especially anxiety and mood disorders (Battle & Zlotnick, 2005; Di Florio et al., 2013; Ross & McLean, 2006; Vythilingum, 2009). Untreated common mental disorders (CMD), such as anxiety and antenatal depression, have been shown to persist postnatally, sometimes for several years (Horwitz, Briggs-Gowan, Storfer-Isse, & Carter, 2009; Howard et al., 2014; Marcus, Flynn, Blow, & Barry, 2005), and are associated with a range of adverse consequences for both mother and infant (Paschetta et al., 2014; Stein et al., 2014). Most studies are concerned with the outcomes for infants and children of affected mothers, which include: preterm delivery (Diego et al., 2008; Grigoriadis et al., 2013; Vythilingum, 2011), low birth weight and adverse foetal growth (Brittain et al., 2015; Grote et al., 2010), poor physical and cognitive development (Patel, Rodrigues, & DeSouza, 2002; Talge, Neal, & Glover), emotional and behavioural problems (Judd, Stafford, Gibson, & Ahrens, 2011; Pawlby, Hay, Sharp, Waters, & O'Keane, 2009); dysfunctional attachment patterns (Dennis & Hodnett, 2009; O'Hara, 2009) and even death (Almond, 2009).

Much less attention has been given to the risks of perinatal mental illness for mothers, but research has highlighted associated outcomes such as substance abuse (Tomlinson et al., 2014; Vythilingum & Roos, 2012), social isolation (Almond, 2009), reduced caregiving capacity (Fisher et al., 2010), subsequent parenting stress (Leigh & Milgrom, 2008; Misri et al., 2010), and suicide (Almond, 2009; Oates, 2003). Apart from the obvious psychological and interpersonal costs to those affected, this range of potentially deleterious outcomes can translate into substantial direct and indirect costs to public health and social welfare (Mann, Gilbody, & Adamson, 2010). Howard, Piot, and Stein (2014) report that the economic costs to society and public services in the UK are estimated to be in excess of £8 billion per annual cohort. They estimate that the costs in LMI countries are higher due to income loss, and the impact this might have on child health and nutrition. With prevalence rates exceeding those found in the general population, CMDs during the perinatal period represent a global public health problem (Almond, 2009; Hanlon, 2013).

2.2.3 Defining common mental disorders in the perinatal period: Clarifying terms

Defining the perinatal period

Until relatively recently, the majority of research on perinatal CMDs has been focused on those that occur post-birth. While the Diagnostic and Statistical Manual (DSM-5) (APA, 2013) specifies an onset of symptoms of within four weeks of delivery, the postnatal period is defined variously by investigators, ranging from within 3 weeks after delivery (Salisbury et al., 2007) to one year postpartum (Banti et al., 2011), with most researchers using a timeframe of within four weeks to three months after birth (O'Hara & Wisner, 2014). For this period, a considerable amount of attention has been given to depression in particular, and there is a substantial body of literature concerned with the prevalence, predictors, and outcomes of this disorder (Gavin et al., 2005; Johnson et al., 2015; Kathree, Selohilwe, Bhana, & Petersen, 2014b; Tannous et al., 2008).

More recently, research regarding CMDs during *pregnancy* has gathered impetus and a similarly large pool of data is now available for this period (Bennett, Einarson, Taddio, Koren, & Einarson, 2004; Grote et al., 2010; Milgrom et al., 2008; Ross & McLean, 2006), with some researchers considering differentiations between trimesters in the antenatal period (Bennett et al., 2004). In LMI countries, most of the data pertaining to antenatal CMDs has only been published since 2002 (Fisher et al., 2012). However, distinctions between the antenatal, postnatal, and non-perinatal structures of mood are thought to be suppositional (Buttner, O'Hara, & Watson, 2012; Howard, Molyneaux, et al., 2014), with research showing that they are qualitatively similar in presentation throughout the perinatal period (O'Hara & Wisner, 2014). This does not presuppose fluctuations in symptom severity, but differences in the subjective experience of symptoms are arguably likely to be primarily related to changes in life circumstances, and really only become significant in the context of treatment considerations (Howard, Molyneaux, et al., 2014).

Diagnostic nosology: common mental disorders and psychological distress

Coined by Goldberg (Goldberg & Huxley, 1992), the term 'common mental disorders' (CMDs) describes the neurotic and non-psychotic affective disorders (anxiety and depressive disorders) that most commonly present in community and primary health care settings. They include a range of somatic, cognitive and emotional symptoms that interfere with individuals' ability to

perform their daily activities (Goldberg & Huxley, 1992). Most perinatal mental health researchers define disorders such as depression and anxiety according to the DSM or ICD criteria (Almond, 2009), which have historically categorised mood and anxiety disorders as different and separate from one another. However, CMDs such as depressive and anxiety disorders are understood to be complexly correlated; based on a common structure; and not as distinct from one another as categorical criteria would suggest (Goldberg, 1996; Hong & Cheung, 2015; Watson, 2005). Researchers have long noted the high comorbidity rates of anxiety and mood disorders suggesting significant links between them (Mineka, Watson, & Clark, 1998). This, along with the heterogeneity of symptoms within categories of disorders, has led to important work in the development of dimensional models to explain these relationships, challenging the utility and accuracy of a purely categorical taxonomic classification system (Simms, Grös, Watson, & O'Hara, 2008; Watson, 2005).

Much of the research in this area has been focused on identifying the unifying factors that underlie these disorders. For example, the existence of a general dimension of subjective distress in the form of 'negative affect' has long been thought to be responsible for the comorbidity between these disorders (Watson, O'Hara, & Stuart, 2008). In line with this, using bifactor analysis, Simms et al., (2008) found that many expressions of anxiety and depression suggest the influence of a single 'general factor of psychological distress', while an additional 13 factors account for their variances. They found that certain symptom groups predicted higher levels of distress than other symptoms groups, supporting the argument for the modelling of anxiety and depressive disorders on a spectrum of severity (Simms et al., 2008). This was corroborated by Xie et al.'s (2012) study of depression and anxiety in patients who were in pain. In this study, the disorders were found to correlate both positively and negatively on a bifactor model: positively, due to the presence of a 'general factor of psychological distress'; and negatively, on the specific features of the disorders (Xie et al., 2012). Most recently, Hong and Cheung (2015) conducted the first meta-analytic study of the structure of six cognitive vulnerabilities associated with depression and anxiety (and thought to precipitate pathological symptoms). They found one common core latent factor among all six vulnerabilities, supporting the idea of a transdiagnostic aetiologic process intrinsic to emotional disorders (Hong & Cheung, 2015).

To develop a more nuanced system that does not simply involve based on concepts of discrete emotional and cognitive processes, Watson, O'Hara, and Stuart (2008) argued for a taxonomy

that collapses mood and anxiety disorders into one superclass of emotional disorders. They proposed three subclasses: the fear disorders (panic disorder, agoraphobia, social phobia and specific phobias); the bipolar disorders (bipolar I, II and cyclothymia); and, the distress disorders (major depression, dysthymia, GAD, and PTSD). This system would support a hierarchical view of the structure of affect, reflecting empirically-based similarities among disorders, rather than assumptions about the phenomenological features they share (Watson et al., 2008). The fifth edition of the DSM (APA, 2013) acknowledges the problems associated with categorical diagnoses and the wide ranging evidence in support of a dimensional approach:

> Indeed, the once plausible goal of identifying homogeneous populations for treatment and research resulted in narrow diagnostic categories that did not capture clinical reality, symptom heterogeneity within disorders, and significant sharing of symptoms across multiple disorders. The historical aspiration of achieving diagnostic homogeneity by progressive subtyping within disorder categories no longer is sensible; like most common human ills, mental disorders are heterogeneous at many levels, ranging from genetic risk factors to symptoms (APA, 2013, p. 11)

However, the DSM-5 Task Force believed it would be "premature scientifically to propose alternative definitions for most disorders" (p. 13) and so efforts to incorporate the findings from this research into the most recent edition (APA, 2013) are relatively minor. They are primarily seen in the revised structure of the manual, where disorders associated with internalising factors (predominantly depressive, anxiety-related and somatic symptoms) were clustered together, and those with externalising factors (symptoms associated with problematic substance use, conduct and impulsivity) were similarly grouped alongside one another (APA, 2013). Disorders such as depression and anxiety are still treated as disparate conditions.

As a result, the strength of the body of data in the area of perinatal CMDs, particularly concerning prevalence and predictors, is arguably diluted by artificial and non-substantive disparities in the narrow categorisation of disorders (Hanlon et al., 2008; Watson et al., 2008), as well as variances in the parameters for the perinatal period. The increasing use of the term 'common mental disorders' may reflect researchers' recognition of the need to expand the definitions of mental illness to a dimensional model. However, the term largely offers a broader collective category while still implying that clear distinctions between the individual disorders exist. It is assumed however, that on the basis of the definition applied above, a general factor of *psychological distress* is inherent to all CMDs and serves as central indicator of one or more. While the terms are not synonymous, they are directly implicated with one another. As such, for the purposes of this chapter, where the literature refers to CMDs, either collectively or

individually, those particular terms used will be retained, along with the assumption that psychological distress is implied.

Screening for perinatal CMDs: a note on measures

As will be shown in the section to follow, while there are some studies that incorporate psychometrically-based diagnostic instruments, a large proportion of studies that have examined the prevalence rates of perinatal CMDs made use of self-report screening measures to do so. Given that they are quickly and easily administered, and most often do not require specialist clinical skills, studies can be conducted more expediently and with larger sample sizes, maximising the generalisability of results to the broader population. However, this is often misleading, as the data is frequently presented using diagnostic terminology such as 'depression', indirectly suggesting that the criteria for the disorder have been assessed for and met. Furthermore, screening scales may be sensitive to transient distress related to situational stressors, potentially leading to false diagnosis. This is perhaps supported by the tendency for prevalence rates based on self-report measures to be higher than those obtained from diagnostic instruments (Matthey, 2010). Irrespective of what they claim to assess for, what all screening measures do arguably provide is evidence for the symptoms of psychological distress that are associated with CMD. In light of the challenges associated with categorical classification systems, it is possible that it is of greater utility to both research and clinical practice to use measures that assess mental health, particularly perinatal mental health, in these broader terms. Furthermore, given the transdiagnostic applicability of most evidence-based psychosocial interventions (Kazdin, 2014b), it seems sufficient to know that an individual is distressed and may benefit from intervention.

2.2.4 Prevalence rates

This section addresses the following question: *What are the global and local prevalence rates of psychological distress and CMDs during the perinatal period?* The prevalence of perinatal CMDs varies widely between studies and across contexts. As highlighted earlier, for the most part, these variances appear to result from disparities between methods, measures and disorder definitions, in addition to differences in defining the parameters of the period under study (O'Hara & Wisner, 2014). The use of screening tools instead of diagnostic instruments is also likely to impact on both the ways in which disorders are defined and how prevalence is determined. Nevertheless, it is widely accepted women are more vulnerable to psychological

disorders during this period, than in non-perinatal periods (Di Florio et al., 2013; Meltzer-Brody et al., 2011). Where prevalence rates of perinatal CMDs are concerned, studies on postnatal depression dominate (Hanlon, 2013), with relatively fewer investigating perinatal anxiety use as a primary research outcome. Overall, there is substantially more evidence from high-income contexts.

Perinatal CMD prevalence in high-income countries

Several systematic reviews have reported on the prevalence of perinatal CMDs from 'high income' (HI) countries (for example, Bennett et al., 2004; Gavin et al., 2005; Goodman, Chenausky, & Freeman, 2014; Howard et al., 2014; Molyneaux, Poston, Ashurst-Williams, & Howard, 2014; O'Hara, 2009; Ross & Dennis, 2009). Most are concerned with postnatal depression, and of these, the majority are presented in narrative format. Very few studies provide meta-analyses of the data. In fact, in a review of systematic reviews, Mann et al. (2010) found that until then, only the Gavin et al. (2005) review provided quality meta-analytic data of postnatal depression. Heterogeneity of data, possibly due to disparate methods and measures referred to earlier, is the most widely cited obstacle to the extraction of data for other reviews.

The review conducted by Gavin et al. (2005) investigated the prevalence and incidence of perinatal depression and compared those rates with those of non-perinatal women. Unlike other reviews, this one only included studies that assessed for depression via clinical assessment or structured clinical interviews. Studies that used self-report measures to detect depression were excluded. Twenty-eight studies, conducted between 1980 and 2004, and all from high income countries, were included in the review. The meta-analysis of this data revealed a point-prevalence estimate of 11.0% during the first trimester of pregnancy, with rates dropping to 8.5% during the second and third trimesters. In the third month after delivery, point prevalence estimates peaked at 12.9%. A decline in prevalence is noted between the fourth and seventh postpartum months, ranging between 9.9% and 10.6%, and then dropping further to 6.5% thereafter. Period prevalence was found to be much higher, at 18.4% during pregnancy and 19.2% within the first 3 months postpartum. Incidence of depression during pregnancy was placed at 14.5% for both pregnancy and within 3 months of delivery. No significant differences were found between prevalence rates of perinatal and non-perinatal women. However, women in the first 5 weeks postnatal were three times more likely to have a new episode of depression than non-perinatal women (Gavin et al., 2005). This increased probability-ratio for postnatal women is echoed in the American study conducted by Vesga-Lopez et al., (2008) who found

the prevalence of mood disorders to be lower in pregnant women than non-perinatal women, but significantly higher in postnatal women compared to perinatal women.

Bennett et al. (2004) conducted a systematic review of 21 studies that were published between 1989 and 2002. The authors were primarily interested in the prevalence of depression during pregnancy, by trimester, as measured by the Beck Depression Inventory (BDI), EPDS, and structured clinical interviews. A secondary aim of the review was to compare prevalence rates between instruments. Their meta-analysis of the data revealed prevalence rates of 7.4% during the first trimester and then, unlike findings of the Gavin et al. (2005) review, rising sharply in the second and third trimesters, with rates of 12.8% and 12.0% respectively. Where differences between instruments was concerned, lower rates were found on structured interviews compared to the BDI, but not the EPDS. Women of low socio-economic status were found to have substantially higher rates of depression: 47% (self-report) and 28% (structured interviews) in the second trimester, and 39% (self-report) and 25% (structured interviews) in the third trimester. Far fewer studies were available for low-income women, however, with only one study from a LMI country (Bennett et al., 2004).

In perhaps the largest most globally representative review of postpartum depression to date, Halbreich and Karkun, (2006) extracted data from 143 studies across 40 countries. They found prevalence rates of between 0% and 60%, concluding that this wide range undermines the accuracy of the oft-cited global prevalence of 10-15%. Their review highlighted a number of important issues in the consideration of perinatal mental disorders: (1) studies focus largely on depression and generally do not consider the broad variability of symptoms that are often experienced by women during the perinatal period; (2) studies tend to be insensitive to the socio-cultural experiences of mothers and how they might inform the way in which meaning is made of symptoms; (3) methodological issues need to be addressed, particularly concerning the use of culturally sensitive tools and measures (Halbreich & Karkun, 2006).

Anxiety disorders are far less studied, and the available data presents an inconsistent picture of how these disorders occur in the perinatal period. Some researchers have suggested that they tend to be more common than depression in HI settings, with rates of up to 15% (Paschetta et al., 2014). Ross and McLean (2006) reviewed studies of anxiety disorders in women from pregnancy to one year postpartum. A meta-analysis was not conducted and the review's methodology was generally unclear, especially in terms of inclusion and exclusion criteria for diagnostic instruments. However, only studies that provided data on discrete anxiety disorders

were reported, including panic disorder, PTSD, generalised anxiety disorder, and OCD. Studies that reported on anxiety symptoms and sub-clinical anxiety were not included. Prevalence rates were presented as they ranged across studies, alongside DMS-IV prevalence estimates (also presented here) for the purposes of comparison. This review found prevalence rates for perinatal panic disorder ranging between 1.3% and 2.0% (within the DSM-IV's one-year prevalence estimate for the general population of 1.0% – 2.0%). OCD during pregnancy was found to be lower during pregnancy (0.2% - 1.2%) than postnatal OCD (2.7% - 3.9%), with the DSM-IV's one-year prevalence between 1.5% and 2.1%. PTSD prevalence rates were less reliable, partly due to heterogeneity of definitions for PTSD and methods used, and so varied widely between 0% and 6.9% among perinatal women (as they do in the DSM-IV one-year prevalence range of 1% - 14%). Only one study reported on the prevalence of GAD during pregnancy, estimated at 8.5%. An additional three studies yielded postnatal prevalence rates ranging from 4.4% to 8.2% (the DSM-IV estimated one-year prevalence at 3%) (Ross & McLean, 2006).

Goodman et al. (2014) conducted a more recent review of the literature regarding perinatal anxiety disorders, including 57 studies that made use of clinical interviews based on DSM or ICD criteria. Twenty studies investigated two or more anxiety disorders, while the remaining 37 were focused on only one. They found prevalence estimates for any anxiety disorder ranging between 4.4% and 39%. Prevalence rates pertaining to specific disorders ranged between 0% - 10.5% for GAD; 0.2% - 5.7% for panic disorder; 0% - 5.2% for OCD; 3.2% - 19.9% for specific phobia; 0.4% - 6.4% for social phobia; 0.9% for agoraphobia without panic to 17.2% for any agoraphobia; and, 0% - 7.9% for PTSD. The authors found conflicting reports between the limited studies that offered comparison data from non-pregnant women, with two studies showing no differences and another two showing significant differences. Notably, in studies that examined comorbid psychiatric diagnoses, a substantial comorbidity was found to exist between anxiety and major depression. Having more than one anxiety disorder was also found to be common (Goodman et al., 2014).

Other systematic reviews investigating perinatal CMD prevalence rates in HI contexts have focused on particular factors that intersect with CMDs. For example, Molyneaux et al. (2014) reviewed 62 studies of antenatal or postnatal mental disorders in women who were overweight or obese at the beginning of pregnancy. Both diagnostic and screening measures to assess for mental illness were accepted. They found that obese women had the highest median prevalence

of elevated depression symptoms during pregnancy (33.0%), and normal weight women had the lowest (22.6%). For elevated postpartum depression symptoms, the median prevalence among obese women was 13.0%, and 9.9% for normal-weight women. A review of 67 studies investigating perinatal mental disorders and domestic violence was conducted by Howard, Oram, Galley, Trevillion, and Feder (2013). They found a combined prevalence estimate of almost 13% for postnatal depression in women who had experienced partner violence during pregnancy. Villegas, McKay, Dennis, and Ross (2011) reviewed data from studies of postpartum depression among rural women in both 'developed' and 'developing' countries. While the overall prevalence of postnatal depression was estimated to be at 27.0% for this population, rural women from developed countries were significantly less depressed than their counterparts from developing countries (21.5% and 31.3% respectively). Most recently, Fellmeth, Fazel, and Plugge (2016) looked at migration and perinatal mental health in women from LMI countries. They extracted prevalence data from 40 studies that were primarily conducted in HI countries, using a variety of validated self-report and diagnostic instruments. They found a pooled prevalence of 31% for any depressive disorder across the perinatal period.

Perinatal CMD prevalence in low-and-middle income countries

While there is some data for women of low socio-economic status who live in high income contexts, less is available for women who live in LMI countries. Perinatal mental health in LMI countries has only recently gained some traction as the subject of research, and so significantly less data are available from these contexts. Fisher et al. (2012) note that most of the available data from these contexts emerged within the last 15 years. Studies suggest that prevalence rates of CMDs among women from LMI contexts are far higher than for women in HI countries.

In their seminal systematic review of the prevalence and determinants of CMDs among perinatal women in low and LMI countries, Fisher et al. (2012) extracted data from 47 studies for meta-analysis. Originating from 17 countries, 13 studies reported on antenatal point prevalence and 34 provided data from the first postnatal year. Most studies were focused on depression. Their analysis revealed a weighted mean prevalence of 15.6% during pregnancy, and 19.8% postnatally. Prevalence rates were much higher among community samples (pregnancy: 19.7%; postnatal: 39.4%) and women sampled from provincial or district health services (pregnancy: 17.8%; postnatal: 20.4%), than from studies situated in tertiary hospital settings (pregnancy: 10.3%; postnatal: 13.6%). The reviewers found significant differences in prevalence rates that were based on self-report measures and those generated from diagnostic

assessment. Notably, prevalence rates during pregnancy were found to be lower on self-report measures (13.43%) compared to diagnostic measures (21.8%). The reverse was true for postnatal studies, where diagnostic tools yielded lower prevalence rates (16.1%) than self-report measures (20.8%). This data reveals that the prevalence rates for perinatal CMD in LMI countries are roughly double those found in HI countries (Fisher et al., 2012).

In their review of perinatal psychological wellbeing in Africa, Sawyer, Ayers, and Smith (2010) found marginally lower prevalence rates than the Fisher et al. (2012) review of LMI countries. The meta-analysis of data from 35 studies revealed estimates of poor general psychological health of between 12.5% and 30.2%, with the majority lying between 12% and 19%. A variety of self-report and/or diagnostic measures were used, but most included studies focused on depression, and most presented postnatal data. The prevalence of depression during pregnancy ranged between 4.3% and 17.4%, with a weighted mean prevalence of 11.3%. Poor general psychological health in the postnatal period was found to range between 6.1% and 33%, while depression ranged widely between 3.2% and 48%. The majority of studies were found to have rates that lie between 10% and 19%, with the weighted mean prevalence for this disorder estimated to be at 18.3%. The mean prevalence of anxiety disorders was placed at 14.8% during pregnancy and 14.0% after birth, suggesting that anxiety disorders might be more prevalent during pregnancy, while depression is more common in the postnatal period.

Perinatal CMD prevalence in South Africa

In South Africa, data regarding the prevalence and predictors of perinatal mental illness are limited and also vary widely. As is found elsewhere in the world, most research has focused on depression, and most make use of validated self-report measures to estimate prevalence. Until recently, most research focused on *postnatal* CMDs. With the international recognition of *pregnancy* as an important period during which to intervene for the benefit of postnatal mental health, South African research shifted accordingly. As such, the preponderance of the most recent perinatal CMD data is from pregnant women, as seen in Table 2.1.

Table 2.1 Studies of perinatal CMD prevalence

Antenatal data		
Source	**Sample**	**Findings**
Hartley et al. (2011)	Community-based sample of 1062 pregnant women from two peri-urban communities in Western Cape	39% were possible cases of depression (EPDS ≥14)
Rochat, Tomlinson, Bärnighausen, Newell, & Stein (2011)	109 women attending a primary health care clinic in rural KwaZulu Natal	47% met DSM-IV criteria for depression on structured clinical interview
Groves, Kagee, Maman, Moodley, & Rouse (2012)	1402 pregnant women attending primary health care clinics in KwaZulu Natal	33.8% assessed as having elevated levels of emotional distress (HSCS >44)
Manikkam & Burns (2012)	387 pregnant women attending tertiary level outpatient services at urban hospital, KwaZulu Natal	38.3% were possible cases of depression (EPDS ≥13)
Vythilingum & Roos (2012)	323 pregnant women attending their first antenatal visit at a MOU in Cape Town, Western Cape	48.9% (EPDS ≥13) and 33.6% (EPDS ≥15) were possible cases of depression
Tomlinson et al. (2014)	Community-based sample of 1145 pregnant women from 24 township communities across Cape Town, Western Cape	37% were possible cases of depression (EPDS ≥14)
Peltzer, Shikwane, & Matseke (2014)	1497 pregnant women attending primary health care clinic in Mpumalanga	26.5% assessed as having high psychological distress (K-10 ≥25)
Brittain et al. (2015)	726 pregnant women attending one of two primary health care clinics in Western Cape	21% were possible cases of depression (BDI-II ≥20)
Van Heyningen et al. (2016)	376 pregnant women in urban setting, Western Cape	22% met the criteria for MDE based on MINI Neuropsychiatric Interview
Postnatal data		
Source	**Sample**	**Findings**
Cooper et al. (1999)	147 women at 2 months postpartum living in Khayelitsha, Western Cape	34.7% diagnosed with depression using the SCID
Cooper et al. (2009)	Control group sample: 184 women at 6 months postpartum and 181 women at 12 months postpartum	15.8% at 6 months postpartum and 15.5% at 12 months postpartum, using the SCID
Ramchandani, Richter, Stein, & Norris (2009)	1035 women at 6 months postpartum, drawn from a longitudinal study situated in Soweto, Gauteng	16.4% were possible cases of depression (Pitt ≥20)
Hung et al. (2014)	249 women at 3 months postpartum, living in Khayelitsha, Western Cape	31.7% were possible cases of depression (EPDS ≥13)

Where CMDs that occur during pregnancy are concerned, study results reveal elevated prevalence rates that range from 21% to 47%. Very similar prevalence data was found among those studies that used the EPDS to determine cases of possible depression. Baseline data from an intervention study conducted by Hartley et al. (2011) found that as many as 39% of 1062 women in two peri-urban communities in Cape Town reported experiencing depressed mood during pregnancy, as measured by the EPDS. Likewise, a study investigating risk factors during pregnancy found depressed mood via the EPDS in 37% of their sample of 1145 pregnant

women from 24 townships across Cape Town (Tomlinson et al., 2014). Also using the EPDS, Manikkam and Burns (2012) found a similar rate of possible depression (38.3%) in their sample of 387 pregnant women in KwaZulu Natal. At a slightly more conservative cut-off of 15 on the EPDS, 33.6% of Vythilingum and Roos' (2012) sample of 323 pregnant women were screened as depressed.

The lowest prevalence rate was observed by Brittain et al. (2015), who found BDI-II scores indicative of depression in 21% of a sample of 726 pregnant women attending one of two primary health care clinics in the Western Cape. The highest prevalence was found in a sample of 109 women recruited from a primary health clinic in a rural area in KwaZulu Natal (Rochat et al., 2011). This was one of only two studies to use a structured clinical interview method and DSM-IV diagnostic criteria to assess for depression during pregnancy, and found that as many as 47% of the sample met the criteria. Using the MINI, van Heyningen et al. (2016) established rates of Major Depressive Episodes in 22% of their sample of 376 pregnant women in an urban setting in the Western Cape. Peltzer, Shikwane, & Matseke (2014) broadened the focus of their study to assess 'psychological distress' by using the Kessler Psychological Distress Scale to measure a range of symptoms associated with CMDs. Their study of 1497 pregnant women receiving antenatal care at primary health care clinics in Mpumalanga estimated the prevalence of high psychological distress to be at 26.5%. Using the Hopkins Symptom Checklist, Groves, Kagee, Maman, Moodley, and Rouse (2012) found that 33.8% of their KwaZulu Natal sample of 1402 pregnant women had elevated levels of 'emotional distress', indicative of anxiety and depressive disorders.

Far less data regarding CMDs in the postnatal period has been gathered. Notably, prevalence rates are also wide-ranging (from 16.4% to 34.7%) but appear to diminish with time, and then may plateau between six and 12 months post-delivery. At the top end of the prevalence range is a study conducted by Cooper et al. (1999) that used the Structured Clinical Interview for DSM-IV (SCID). Results show a postnatal depression prevalence rate of 34.7% at two months post-birth in their sample of 147 mothers, who live in Khayelitsha, a peri-urban settlement in Cape Town. In the same community, approximately 15 years later, another study found a prevalence rate of 31.7% for depression at three months postpartum among a sample of 249 women (Hung et al., 2014).The largest study of postnatal depression was conducted in Soweto, Gauteng Province, and found that 16.4% of the study's 1035 participants were probable cases of postnatal depression as measured by the Pitt Depression Questionnaire (Ramchandani et al.,

2009). Similar rates were found at the same interval of six months post-birth in the control group of an intervention study conducted by Cooper et al. (2009). Using the SCID, this study found a depression prevalence of 15.8% among a sample of 184 women. At 12 months postnatally, 181 women from the same control group were assessed again and symptoms were found to persist in 15.5% of the sample. Sawyer et al. (2010) noted South Africa's particularly high postnatal depression rates in their review of perinatal psychological well-being in Africa, placing the mean prevalence rate at 21.6%. They suggest that these results provide some insight into the effect of time on the prevalence rate of depression in the postnatal period. It is of some interest to note that, where postnatal disorders tend to be more prevalent than antenatal disorders in other parts of the world (Fisher et al., 2012; Gavin et al., 2005), South African data seems to suggest that the opposite holds true. Insufficient data for South Africa makes it difficult to establish this conclusively.

2.2.5 Risk factors associated with perinatal CMDs

This section seeks to answer the following question: *What risk and protective factors have been found to be associated with perinatal mental illness?* There is a substantial body of literature concerning the risk factors for perinatal mental illness among mothers who reside in HI countries (see for example, Coelho, Murray, Royal-Lawson, & Cooper, 2011; Lee, Lam, & Lau, 2007; Leigh & Milgrom, 2008a; Milgrom et al., 2008; Robertson, Grace, Wallington, & Stewart, 2004; Wylie, Hollins Martin, Marland, Martin, & Rankin, 2011; Xie et al., 2010). Systematic reviews have identified variables such as stressful life events, poor social support, previous history of mental illness, poor self-esteem, antenatal depression and/or anxiety, unwanted or unintended pregnancy, unemployment, intimate partner relationship problems, nutrient deficiencies, and poverty as those most commonly associated with perinatal CMDs in high-income countries (Lancaster et al., 2010; Leung & Kaplan, 2009; Robertson et al., 2004). Despite evidence to show that postpartum depression is more prevalent than depression during pregnancy (Fisher et al., 2012; Gavin et al., 2005), depression and anxiety during pregnancy have both been found to be the most significant risk factors associated with postnatal depression (Edwards, Galletly, Semmler-Booth, & Dekker, 2008; Leigh & Milgrom, 2008; Milgrom et al., 2008). However, while some studies have investigated the antenatal risk factors of postnatal mental illness, very few studies have sought to identify the risk factors associated with mental illness during *pregnancy* (Leigh & Milgrom, 2008).

In LMI contexts research on predictors of perinatal mental illness is far more limited (Fisher et al., 2012; Patel et al., 2002; Ramchandani et al., 2009). Fisher et al.'s (2012) systematic review of perinatal mental illness in LMI contexts found that socio-economic deprivation was the factor most widely associated with risk for mental illness. Other significant risk factors included, intimate partner relationship difficulties, physical abuse during pregnancy, poor postpartum social support, adverse reproductive events (such as unwanted or unintended pregnancies and past pregnancy losses), and past psychiatric illness and "less specific" psychological symptoms during pregnancy (Fisher et al., 2012). Sawyer, Ayers, and Smith's (2010) systematic review of 35 studies conducted in African settings found no connection between adverse reproductive experiences and antenatal depression, but some evidence of a correlation postnatally. This review also found a strong connection between risk and poor social support from family and partners in both the ante- and postnatal periods; and, previous experience of mental illness or psychological symptoms were also implicated (Sawyer et al., 2010).

In South Africa, data regarding risk factors for perinatal mental illness is still emerging. However, based on what is known, there are clear parallels to risk factors found in other settings. Interpersonal and relational factors repeatedly emerge as risk factors of psychological distress and CMDs. Single marital status (Brittain et al., 2015; Manikkam & Burns, 2012); experiencing difficulties in an intimate partner relationship (Ramchandani et al., 2009); having a controlling partner (Groves et al., 2012), or an unsupportive partner (Kathree et al., 2014b; Tomlinson, Swartz, Cooper, & Molteno, 2004); and, having poor family or social support (Roos, Faure, Lochner, Vythilingum, & Stein, 2013; van Heyningen et al., 2016), have all been identified as risk factors. Traumatic and violent experiences have also been shown to be highly associated with elevated symptoms. These include, witnessing or experiencing a traumatic or life-threatening event (Ramchandani et al., 2009; van Heyningen et al., 2016); stressful life-events (Brittain et al., 2015); a history of childhood sexual abuse (Brittain et al., 2015; Groves et al., 2012); and, being the victim of intimate partner violence (IPV) – sexual, psychological or physical – especially in the previous year or during pregnancy (Brittain et al., 2015; Groves et al., 2012; Tsai, Tomlinson, Comulada, & Rotheram-Borus, 2016). Predictors associated with pregnancy include unwanted or unplanned pregnancies (Manikkam & Burns, 2012; Peltzer et al., 2014; Tomlinson et al., 2004), and being in the first or third trimester, compared to the second (Groves et al., 2012). Having a sexually transmitted infection (not HIV) and being HIV seropositive (Manikkam & Burns, 2012; Peltzer et al., 2014) are also risk factors, as is having

a history of depression or anxiety disorders (Manikkam & Burns, 2012; van Heyningen et al., 2016). Variables associated with poverty and inequality such as low socio-economic status and economic deprivation (Brittain et al., 2015; Hartley et al., 2011), as well as food insecurity (Dewing, Tomlinson, Le Roux, Chopra, & Tsai, 2013; Kathree et al., 2014b; van Heyningen et al., 2016) are also known risk factors for perinatal CMDs.

The variances found in South Africa's prevalence rates might be explained by small sample sizes and the heterogeneity of methods employed between studies: the use of different measures, varying cut-off scores even on the same measures, and different points of assessment in the perinatal period. However, these variances are noted in most perinatal studies and do not necessarily account for the fact that South African prevalence rates are generally high. It is possible that additional factors or the interactions of factors play a role in the South African context. For example, it has been shown that intimate partner violence (IPV) is a risk factor for women globally and is not a predictor that is unique to South African women. However, South Africa has one of the highest rates of IPV and sexual violence in the world (Abrahams, Mathews, Martin, Lombard, & Jewkes, 2013; Jewkes, Dunkle, Nduna, & Shai, 2010; Myers et al., 2015). As such, a greater number of South African women experience more violence and a greater threat of violence, potentially making more women vulnerable to distress in this context than in those where violence is less commonplace. This, combined with persisting social and economic inequalities; as well as overburdened social welfare and healthcare systems, arguably puts women at greater risk for distress during this time.

Despite the strides made in understanding more about perinatal psychological distress and CMDs, there is still a great deal that is unknown. The wide range of prevalence estimates makes it difficult to draw conclusions about these disorders. This is especially so given that the focus has been limited to symptoms of depression. As such, the prevalence and factors associated with antenatal psychological distress remain poorly understood. Identifying a broader range of symptoms as well as those factors that put women at risk for antenatal mental illness (and so at risk for postnatal mental illness) might provide important information as to the development of early and appropriate interventions. Chapter 3 addresses this gap by answering the following two-pronged question:

What is the prevalence rate of psychological distress during pregnancy among women who receive antenatal care at primary health care centres, and what are the associated risk and protective factors?

2.3 Barriers to public mental health care in the perinatal period

This section addresses the following questions: *What are the factors that represent barriers to care,* and *what role does mental health literacy play in the help-seeking of perinatal women. Also what perceptions do pregnant women have of perinatal mental illness?* Given the findings concerning the adverse outcomes of perinatal mental illness, ongoing efforts to improve treatment access and efficacy are warranted. However, despite evidence that pharmacotherapy and psychotherapeutic interventions are helpful for treating psychiatric disorders, there are numerous barriers that contribute to inadequate care (Seedat, Stein & Berk, 2002; Trump & Hugo, 2006). Data from high income countries show that both structural and attitudinal barriers contribute to accessing psychological care during the perinatal period (Bilszta et al., 2010; Goodman, 2009; Goodman & Tyer-Viola, 2010; Horowitz & Cousins, 2006). Vesga-Lopez et al. (2008) found that American women who were pregnant in the past year were less likely to seek treatment than non-perinatal women. This study also found that treatment rates among pregnant women with psychiatric disorders were very low. Across high income settings it is estimated that fewer than one in six pregnant women who screen positive for depressive symptoms receive any treatment (Fonseca et al., 2015; Marcus, Flynn, Blow, & Barry, 2003). While there are currently no such perinatal data available in South Africa, a national representative epidemiological study (SASH) indicated that only 28% of all South Africans with moderately severe to severe mental disorders, and 24.4% of all people with mild mental disorders, received treatment within a twelve-month period (Williams et al., 2008).

2.3.1 Resource limitations and other structural barriers

Globally, the under-prioritisation of mental health services has long been regarded as the most significant contributing factor to the treatment gap. Where the allocation of expenditure on health is concerned, mental health has often been referred to as the 'step-child' of health (Marais & Petersen, 2015), prompting calls for "no health without mental health" (Prince et al., 2007). Even so, resources continue to be considerably limited and largely inaccessible to a substantial proportion of the population, especially in LMI settings. In fact, in reviewing the WHO's *Atlas* reports between 2005 and 2011, Kakuma et al. (2011) noted a slight increase in the median number of mental health human resources in high income countries, but a small drop in LMI contexts. In 2011, for every 100 000 people in the general population, LMI countries had a median of 0.14 psychologists, 0.54 psychiatrists, and 0.13 social workers, employed in public service. For 2005, these numbers represented a shortage of almost 1.2

million mental health workers in all 144 LMI countries. Comparatively, the median number of resources in high income countries was 3.79 psychologists, 8.59 psychiatrists, and 2.16 social workers (Ritsuko Kakuma et al., 2011). In South Africa, the most recent statistics show that the public health sector employs 0.3 psychiatrists, 0.3 psychologists and 0.4 social workers per every 100 000 South Africans (Lund, Kleintjes, Kakuma, & Flisher, 2010). These numbers fall far below Kakuma et al.'s (2011) calculation of 26.7 mental health workers required per 100 000, highlighting the major barrier to care that resource limitations signify.

An important review conducted by Petersen and Lund (2011) examined the status of mental health care in South Africa between 2000 and 2010. Their findings highlight several important structural barriers to accessing psychosocial care at primary care level. First, the decentralisation of psychiatric services to community-based care has been slow, with budget cuts at tertiary psychiatric level not necessarily accompanied by increased fiscal resources to support expanded primary or community level services. Second, the identification and treatment of CMDs at primary care level tend to be inconsistent and irregular. Insufficient training, under-developed referral pathways, and a lack of time on the part of the health care providers are some of the reasons cited for poor detection and treatment of CMDs in PHC facilities. Third, language and class differences can also pose as barriers, especially where psychotherapy is concerned. In these contexts, translation services are either absent or inadequate and represent a challenge to the protection of patients' rights to confidentiality (Petersen & Lund, 2011).

Other structural barriers encountered by perinatal women in HI settings have been found to include lack of medical insurance or an inability to pay for services, work commitments, transportation costs, and childcare responsibilities (Kim et al., 2010; O'Mahen & Flynn, 2008), as well as stigma and a lack of time to attend to treatment (Goodman, 2009; Goodman & Tyer-Viola, 2010). These barriers are shared by women in low-income settings but exacerbated and complicated by factors associated with poverty and financial constraints (Anderson et al., 2006) that go beyond the affordability of services. In these contexts, even where mental health services are available at primary health care level, they are typically only available during working hours, and usually at health centres or clinics. Transport costs coupled with time off from work (likely meaning no pay for that period) can make services as inaccessible as if they were not available at all (Nakku et al., 2016).

2.3.2 Mental health literacy as a barrier

In addition to structural barriers and inadequate resources, limited knowledge of the signs and symptoms of mental illness, cultural beliefs, and stigma have also been implicated in low self-referral rates among perinatal women (Freed, Chan, Boger, & Tompson, 2012). The adverse outcomes associated with perinatal mental illness make the early recognition of symptoms and uptake of treatment particularly critical (Freed et al., 2012). However, research shows that women in the perinatal period often fail to recognise depression in themselves (Dennis & Chung-Lee, 2006; Fonseca et al., 2015), while the signs and symptoms frequently also go undetected by their healthcare providers (Goodman & Tyer-Viola, 2010). When symptoms are recognised, a lack of trust in medical professionals and low confidence in the helpfulness of treatment become additional obstacles to care (Jesse, Dolbier, & Blanchard, 2008; Levy & O'Hara, 2010). At least in part, low levels of mental health literacy among women and their healthcare providers are thought to account for this.

Coined by Jorm (1997), mental health literacy (MHL) is a term that emerged from the concept of 'health literacy'. Health literacy is based on the premise that the public are better enabled to make important health decisions if they have access to information about the prevention, early intervention and treatment of physical diseases (Jorm et al., 2006; Mårtensson & Hensing, 2012). MHL is the mental health equivalent and is defined as "knowledge and beliefs about mental disorders which aid their recognition, management or prevention" (Jorm, 1997, p.182). In addition to being able to recognise mental illnesses, this construct includes knowledge of risk factors, causes, as well as effective treatments and professional services (Jorm, 2012b). Research from a range of countries suggests that poor MHL serves as a barrier to effective help-seeking, as well as contributing to patients' failure to adhere to recommended treatments once a diagnosis is received (Bruwer et al., 2011; Jorm et al., 2006; Trump & Hugo, 2006). According to Schomerus et al. (2012) this is a concept that advocates a biomedical understanding of mental illness, so as to facilitate a public view of mental illness as being just like any other illness, and receptive to medical treatment. The goal is to reduce stigma associated with mental illness and facilitate greater acceptance of and adherence to evidence-based treatments (Schomerus et al., 2012).

MHL has been relatively widely researched in high income settings, especially in Australia, Europe and North America, with most surveying the general population (Furnham & Hamid, 2014). In 2006, Jorm and his colleagues (who have focused primarily on the Australian public)

reviewed the evidence that had been collated in the decade since the introduction of the term (Jorm, et al., 2006). They found that the Australian public were generally unable to provide the correct psychiatric label for mental disorders portrayed in hypothetical vignettes. In addition, they found disparities between public and professional views on appropriate treatments; and that internalised negative attitudes (or 'self stigma') played a significant role in limiting help-seeking (Jorm, et al., 2006). A more recent review of studies that examined nationally-representative time-trend analysis studies of public awareness found a general increase in public MHL over the last 20 years; with a greater inclination towards biomedical explanations; and, increased acceptance of professional intervention (Schomerus et al., 2012).

Furnham and Hamid's (2014) systematic review of MHL in what they term 'non-Western' countries looked at studies conducted in a wide range of countries. Most studies included in the review were in fact conducted in Western and high-income countries, but with "non-Western ethnic groups". The review found a low recognition rate for most psychiatric disorders, including, schizophrenia, eating disorders, social phobia, and personality disorders. Depression was more readily recognised than schizophrenia. Women were found to show greater recognition and were more likely to seek professional help. The same held true for urban compared to rural populations. The review's conclusions were focused on highlighting the methodological problems underlying this field of research (for example, the use of non-standardised vignettes) (Furnham & Hamid, 2014).

Recognition of symptoms of psychological distress in perinatal women

Internationally, research investigating the MHL of women during the perinatal period is very limited. A small body of data has been gathered from high income countries about perinatal women's perceptions of mental illness and perceived barriers to care. This data shows that symptoms of psychological distress are often mistaken for the profound but typical physiological changes associated with pregnancy and the postpartum period (Bilszta et al., 2010). This is especially so during pregnancy, more so than postnatally (Henshaw et al., 2013; Highet et al., 2011; Hübner-Liebermann et al., 2012). Since somatic symptoms are generally more common among women with depression (Nylen, Williamson, Hara, Watson, & Engeldinger, 2013), especially women from LMI contexts (Howard, Molyneaux, et al., 2014), the interpretation of these symptoms as simply pregnancy-related is then not surprising. Additionally, low MHL has been shown to be associated with increased presentation of somatic complaints (Ganasen et al., 2008). As a result, mental illness in perinatal women is often not

recognised, representing another barrier to help-seeking and care (Bilszta et al., 2010; Fonseca et al., 2015; Goodman, 2009).

Fonseca et al. (2015) report on two studies that illustrate this. First, Whitton, Warner, and Appleby (1996) found that while 97% of their sample of clinically depressed women in the postnatal period recognised that they had been feeling worse than usual, less than a third believed that they were depressed. Second, Henshaw et al. (2013) found that of the almost 90% of clinically depressed or anxious women in their sample who thought of themselves as having an emotional problem, two thirds considered obtaining professional assistance, but only one third attended an appointment with a mental health professional. Other studies have shown that only about half of those women with clinical depression recognise that they are depressed (Freed et al., 2012). The evidence suggests that women often feel that the problem is not serious enough to ask for help; that admitting to needing help will be a sign of weakness or that they are inadequate mothers; and, that the symptoms will spontaneously resolve with time (Bilszta et al., 2010).

Where perceptions of treatment for perinatal mental illnesses are concerned, studies show that women are likely to turn to their informal social networks first (Henshaw et al., 2013). Studies typically show that perinatal women have the least confidence in medications and a preference for "talking therapies" (Dennis & Chung-Lee, 2006). One study found that women who were pregnant and screened positive for depression had the most confidence in psychotherapy and support from friends and family, and the least in medication and case management as treatment options (O'Mahen & Flynn, 2008). Goodman's (2009) sample of high-income, pregnant American women who were depressed expressed a preference for individual therapy. A minority (14%) indicated that they would attend group therapy, and less than a third reported that they would take medication, even if recommended by a doctor. A study of the Canadian public's views on treatment for perinatal women found that respondents preferred counselling and talking to a medical professional, such as a doctor or midwife (Kingston et al., 2014). Despite the preference that perinatal women tend to show for talking interventions, the uptake of such services when offered is generally very low (Kim et al., 2010).

MHL in LMI countries and South Africa

MHL data from LMI countries are less readily available (Atilola, 2015; Furnham & Hamid, 2014; Jorm, 2012), and for perinatal populations it is almost non-existent. Ganasen et al.'s

(2008) systematic review of MHL in 'developing' countries found that public knowledge of mental illness as medical conditions is low, as is awareness of evidence-based treatments. Notably, MHL among primary health care professionals was also found to be poor. In support of this, they point to the study conducted by Dirwayi (2002), who interviewed 87 nurses at 13 primary healthcare clinics across the Western Cape in South Africa. She found that 97% of the nurses interviewed were unable to identify the disorders presented in vignettes, especially depression and anxiety. Since the detection of perinatal mental illness largely falls to those healthcare professionals responsible for ante- and postnatal care, this finding is concerning. Ganasen et al.'s (2008) review also found that in addition to cultural beliefs about mental illness, stress was most commonly associated with causal attributions, more so than medical explanations.

Atilola's (2015) systematic review of levels of community MHL in sub-Saharan Africa highlighted the limited data in this area. The available data reflected poor knowledge of orthodox labels for psychiatric syndromes. Supernatural explanations for symptoms were predominant, with alternative mental health services identified as the preferred treatment option (Atilola, 2015). In South Africa, low MHL is thought to be a major factor impeding help-seeking of evidence-based mental health care (Bruwer et al., 2011). However, only a handful of studies have been conducted. The South African Stress and Health (SASH) study, a nationally representative study investigating barriers to treatment in South Africa, found that a low perceived need for treatment (92.8%) was the single most influential factor for not seeking treatment (Bruwer et al., 2011). Respondents who did recognise the need for treatment but did not seek help reported at least one psychological barrier as a reason, including the belief that symptoms would spontaneously resolve (Bruwer et al., 2011). Here, MHL has been investigated with people living with HIV/AIDS (Sorsdahl, Mall, Stein & Joska, 2010), families affected by schizophrenia (Mbanga et al., 2002), and in community samples (Hugo, Boshoff, Traut, Zungu-Dirwayi, & Stein, 2003; Sorsdahl & Stein, 2010). Findings from these studies suggest that South Africans frequently do not associate psychiatric symptoms with mental illnesses and usually ascribe symptoms to intrapsychic factors such as stress or lack of will-power (Bruwer et al., 2011; Hugo et al., 2003; Sorsdahl et al., 2010; Sorsdahl & Stein, 2010). Nonetheless, these studies found that the most widely endorsed treatments were consulting a medical professional or a counsellor, psychotherapy, and talking it over, while the use of psychotropic medication was generally not supported in the treatment of CMDs (Hugo et al., 2003; Sorsdahl et al., 2010a; Sorsdahl & Stein, 2010).

Despite the recognition of the importance of improving MHL for the promotion of effective interventions, relatively little is known about MHL in LMI countries (Sorsdahl, Stein, & Lund, 2012). Even less is known about the ways in which pregnant women perceive and make sense of symptoms associated with common mental disorders during pregnancy, nor whether or not these perceptions vary by the disorder presented. A very small body of research has sought to investigate mental health literacy regarding perinatal mental illness in resource-rich countries, but research in LMI countries, including South Africa, is absent. Chapter 4 addresses these gaps by answering the following question:

What perceptions do pregnant women have of mental illness during the perinatal period, including their beliefs about causes and views on the most effective treatments?

2.4 Closing the gap in perinatal mental health care: Task shifting as a viable approach

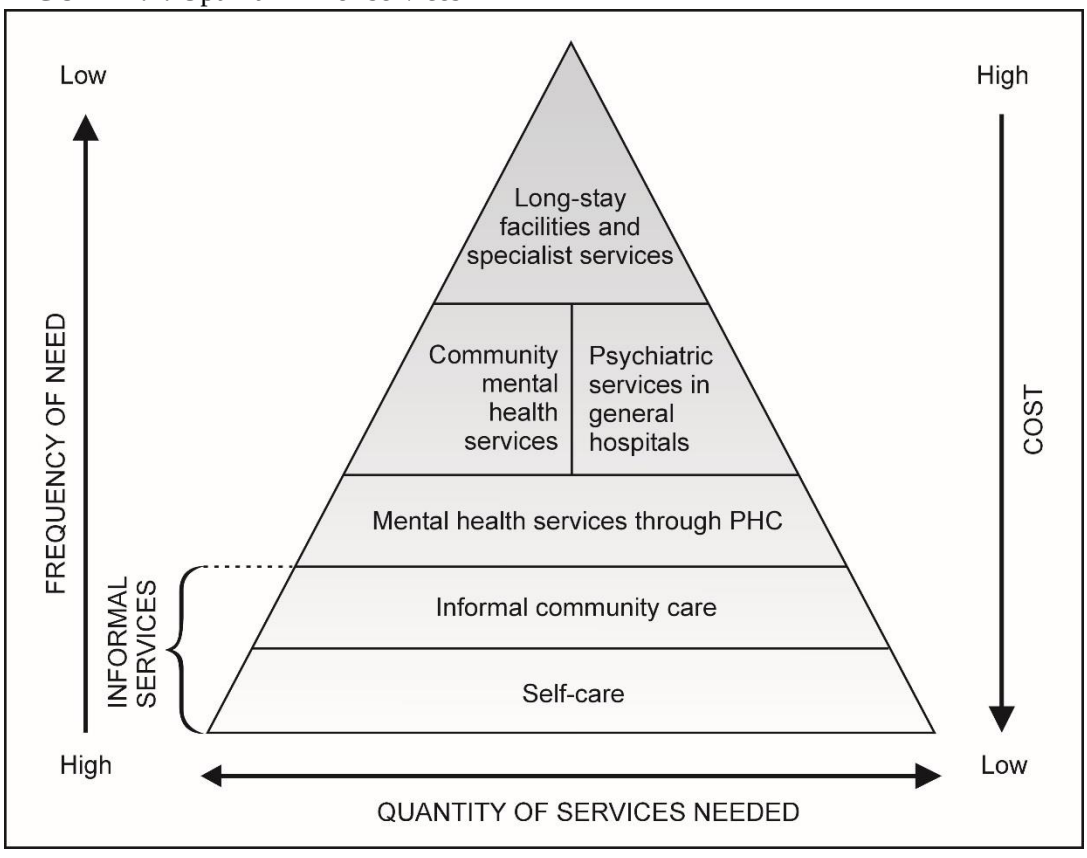
What is known about perinatal mental illness has drawn attention to the need for programmes aimed at the detection (see for example Freed, Chan, Boger, & Tompson, 2012; Judd, Stafford, Gibson, & Ahrens, 2011; Leigh & Milgrom, 2008; Miller, Shade, & Vasireddy, 2009), prevention (see for example Boath, Bradley, & Henshaw, 2005; Creedy & Dennis, 2004; Glavin, Smith, Sørum, & Ellefsen, 2010; Rowe & Fisher, 2010) and treatment thereof (see for example Bergner, Monk, & Werner, 2008; Cooper, Murray, Wilson, Romaniuk, & Ay, 2003; Dennis & Hodnett, 2009; Logsdon, Wisner, Sit, Luther, & Wisniewski, 2011; Murray et al., 2003; Reay et al., 2006). However, until relatively recently, most intervention studies have been focused on the treatment of *postnatal* psychological distress (Dennis & Hodnett, 2009). Despite the adverse outcomes associated with perinatal mental illness, one systematic review of treatment interventions for *antenatal* depression – accepted as being the strongest predictor of postnatal depression (Fisher et al., 2012; Rahman, Malik, Sikander, Roberts, & Creed, 2008) – found that studies of psychosocial and psychological interventions aimed at reducing antenatal depressive symptomology were almost non-existent, even in high-income countries (Dennis, Ross, & Grigoriadis, 2010). More recently, there has been greater recognition of the need to develop interventions that commence during pregnancy to treat women who are screened as being at-risk for perinatal CMDs (Rahman et al., 2013). Ensuring that psychologically distressed women have access to the necessary mental health care during pregnancy would require the integration of these services into primary antenatal care. In the

context of health care systems that are already overburdened, the development of viable models for this integration to occur is essential.

The integration of mental health services into primary care

In response to the treatment gap crisis, the WHO developed a pyramidal framework regarding the "optimal mix for mental health services" (WHO, 2007) (see Figure 2.1) intended to guide governments in the conceptualisation of equitable and viable mental health policies and plans. The chief recommendations proffered by the WHO include limiting the number of mental hospitals or specialist services (at the top of the services pyramid), whilst simultaneously developing mental health services in communities as well as in general hospitals; integrating mental health into primary health care; building informal community mental health care services; and, promoting self-care (at the base of the framework). At the core of these recommendations is the deinstitutionalisation and decentralisation of mental health care so that services and interventions are located where they are primarily needed and most accessible: at primary care level within communities.

FIGURE 2.1: Optimal mix of services



Source: World Health Organisation (2007)

The WHO have proposed that, at each tier, certain combinations of professionals and laypeople might be utilised in order to provide or facilitate the delivery of services (WHO, 2003; 2007) For example, at primary health care level, the provision of mental health services should increasingly become the responsibility of primary care workers, such as nurses or doctors, who must receive ongoing training and supervision from specialist mental health professionals, such as psychologists and psychiatrists (WHO, 2003). At primary healthcare level, trained and supervised lay workers such as community health workers or lay counsellors might be used to deliver primary level and preventative interventions. In so doing, the need for highly specialised and limited professional services might arguably be reduced, as those needs are met elsewhere. It is this conceptual framework that has led to significant interest in task-shifted interventions as a possible solution to the problem of making effective mental health services more accessible to the general population. However, the viability of this framework is wholly dependent on the successful integration of mental health services into general health care.

2.4.1 Definition, description and origins of task shifting

Endorsed and advocated by the World Health Organisation, task shifting is defined as "…involv[ing] the rational redistribution of tasks among health workforce teams. Specific tasks are moved, where appropriate, from highly qualified health workers to health workers with shorter training and fewer qualifications in order to make more efficient use of the available human resources for health" (WHO, 2008b, p. 7). As such, less complex diagnoses can be carried by non-specialist health workers (NSHW) so as to free up resources to deal with those cases that require specialist expertise and management (Ritsuko Kakuma et al., 2011). This translates into more cost-effective ways of delivering health services to more people, ultimately providing viable strategies for reducing the large mental health treatment gap (Rebello et al., 2014).

More recently, the term 'task-sharing' has come to find more favour with some researchers and the terms are often used interchangeably. There is, arguably, an important distinction between the two however, in that task sharing implies a more collaborative approach that flattens out the hierarchical structure of a physician-centred model (Dawson, Buchan, Duffield, Homer, & Wijewardena, 2014). Implicit to the concept of task sharing is the idea that the same tasks are performed by different cadres of health worker; that interventions/treatments are delivered in a collaborative way, and that responsibility for treatment is shared in this way (Joshi et al., 2014). Task shifting demonstrates that tasks that have traditionally been thought of as solely

within the scope of specialist practice can often be performed by health care workers without specialist training (WHO, 2012). These tasks are *shifted* to a less qualified professional so that specialist attention is more readily available to those who most need it.

While the treatment gap in HI countries is substantially narrower compared to that in LMI countries (Goodrich & Kilbourne, 2013), restricted resources in primary health care are a burden that even well-resourced countries must bear. Strategies to manage expanding treatment gaps, such as the collaborative care model, have found some traction in these settings too. This model is not wholly dissimilar to task sharing in that it utilises a team of specialist and non-specialist health workers to share responsibility for the delivery of integrated mental health care in primary care settings. However, it is somewhat more sophisticated in so far as it incorporates a co-ordinated, patient-centred, evidence-based, and multi-disciplinary approach to mental health care that is centred on collaborative thinking between health care providers and users regarding treatment goals, decisions and care (Goodrich & Kilbourne, 2013). Collaborative care and – to some extent – task sharing, can only be effective in contexts where there is at least one specialist to oversee and co-ordinate the sharing of tasks. In settings where no specialists are available, tasks must be *shifted* to another cadre of health care worker (Goodrich & Kilbourne, 2013; WHO, 2012).

As an approach, task shifting has its origins in HIV/AIDS care, where human resource shortages and the burden on public health systems in developing countries have been profound, limiting access to antiretroviral therapies (ART) (Emdin & Millson, 2012). In recent times, studies have shown that task shifting models provide high-quality, cost-effective care to more HIV-infected patients than physician-centred models (Callaghan, Ford, & Schneider, 2010); and, have increased patient access to ART (Emdin & Millson, 2012). In fact, where South African mental health services are concerned, perhaps the first area in which mental health services have become integrated into primary health care (PHC) in a task-shifted manner is in the inclusion of pre- and post-HIV-test counselling, where the use of lay counsellors in PHC settings is now a matter of standard care (Petersen, Fairall, Egbe, & Bhana, 2014). Furthermore, with the increasing recognition of the impact of optimal mental health on physical well-being, studies investigating the utility of interventions delivered by lay counsellors to improve health behaviours, such as treatment adherence, are also on the rise (Parry et al., 2014).

In their review of costs of mental illness and the cost-effectiveness of treatments, Jack et al. (2014) found that interventions that incorporate mental health into primary care or community services without utilising specialist services were the most cost-effective. Lund and Flisher (2009) developed a context- and need-specific model to calculate the costs of implementing an integrated community mental health service. This model highlights the cost-effectiveness of addressing mental health needs in South African communities utilising task shifting approaches. However, no matter how innovative and effective task shifting approaches prove to be in reducing the mental health treatment gap, specialist services will always be required (Freeman, 2016; Ritsuko Kakuma et al., 2011). Furthermore, while it is the aim of task shifting to reduce costs and increase resources, the recommendations put forward by the WHO (2012) caution strongly against relying solely on these approaches to deal with health workforce constraints and emphasise that these should be implemented in conjunction with strategies aimed at increasing the number of health workers. Petersen, Lund, Bhana, et al. (2012) calculated that costs incurred by the employment of additional community health workers to deliver interventions that might address the treatment gap in rural settings would be offset by a reduction in the number of specialist and non-specialist staff required. They, however, have also stressed the need for expanding the evidence base for effective interventions and ensuring that such personnel are adequately supported (Petersen et al., 2012).

2.4.2 Evidence of task-shifted interventions from LMI countries

The following section seeks to answer this question: *What evidence is there to support the use of task shifting in mental health?* Understandably, task shifting has gained particularly significant ground in LMI countries, where the prevalence of mental illness is high (Fisher et al., 2012; Lund, Breen, et al., 2010) and strained mental health resources are a commonly shared problem (Patel, 2009). A recent Cochrane review (Van Ginneken et al., 2013) of the effectiveness of NSHW interventions for mental, neurological and substance-abuse (MNS) disorders in LMI countries found that task shifting interventions to NSHWs, compared with usual health care services, may: increase the number of adults who recover from depression and/or anxiety disorders, up to six months after treatment; slightly reduce symptoms of perinatal depression in mothers; slightly reduce post-traumatic stress disorder symptoms in adults who have suffered trauma; probably slightly improve the symptoms of people with dementia; probably improve/slightly improve the mental well-being, burden and distress of carers of people with dementia; and, decrease alcohol consumption in people with alcohol-use

disorders. However, the review found that in addition to studies being of generally low quality, too few had been conducted within each health worker category and so conclusions about the specific characteristics that made interventions effective could not be drawn (Van Ginneken et al., 2013). Where the prevention of MNS disorders is concerned, another review (Mutamba, van Ginneken, Smith Paintain, Wandiembe, & Schellenberg, 2013) of lay community health workers' (CHW) roles and effectiveness in the delivery of interventions in LMI countries had similar findings. They found that while CHWs might provide effective psychosocial and psychological interventions for the primary and secondary prevention of MNS disorders in LMI contexts, robust evidence of such strategies in these settings is currently insufficient (Mutamba et al., 2013)

Padmanathan and de Silva (2013) reviewed the feasibility and acceptability of task sharing mental health care in LMI countries among service users and health practitioners. While generally in support of the utility of task shifting, the findings also issued caution against viewing task sharing as an "outright solution" to the human resource crisis in LMI countries, as the authors underscore the need for several important factors to be considered for task sharing to be acceptable and feasible. These include, attending to the levels of distress experienced by the workforce; their self-perceived level of competence; acceptance of their integration into health systems by other health care professionals; as well as, the incentives provided to ensure workforce retention. Significantly, the review concludes that the main barrier to addressing these is a lack of resources, emphasising the importance of increased investment in mental health (Padmanathan & De Silva, 2013). This was a conclusion shared by Joshi et al. (2014) who reviewed task shifting interventions for the management of non-communicable diseases, including mental illness, in LMI countries. They found that while task shifting is a viable and cost-effective model, health policy and systems require restructuring and upscaling to accommodate this approach (Joshi et al., 2014).

Rahman et al. (2013) presented the first systematic review of studies investigating the efficacy of task-shifted interventions for perinatal mental illness in LMI countries. Thirteen studies were meta-analysed, with primary outcomes that incorporated factors such as maternal mental health, the relationship between mother and infant, and the developmental health of the infant. Intervention characteristics varied widely but largely involved cognitive-behavioural and psycho-education strategies. The review found that improving maternal mental health had a positive impact on infant development and health. Correspondingly, improving mothers'

ability to respond to their infants' needs (thereby strengthening their relationship) also improved maternal mood. Thus, the review found strong support for task shifting interventions delivered by NSHW who received consistent supervision (Rahman et al., 2013). Similarly, in their systematic review and meta-analysis, Clarke at al. (2013) pooled the data from 10 trials of psychosocial interventions delivered by NSHW in community settings and antenatal units, aimed at reducing perinatal CMDs. They found that, compared to usual care, interventions led to an overall reduction in CMD symptoms when using continuous data for symptomology. However, in the binary categorisation of CMDs as present or absent, the same reduction was not seen. They concluded that NSHW-delivered interventions are beneficial to the reduction of CMD symptoms but do not necessarily decrease the likelihood of being diagnosed with a disorder (Clarke et al., 2013; The PLOS Medicine Staff, 2014).

2.4.3 South African evidence for task shifting

While task shifting is strongly endorsed as a means to treating mental illness, even international evidence of such interventions remains limited (Patel, 2012). In fact, Petersen and Lund's (2011) review of South African mental health services between 2000 and 2010 showed that intervention studies on the whole were in the minority, with only two intervention studies included in their review for that period, none for task shifting. Mental health intervention studies are labour-intensive and expensive, which might explain why so few are undertaken. It seems clear that, since Petersen and Lund's (2011) review – carried by the impetus of the global mental health movement and driven by the imminent implementation of the National Health Insurance (NHI) – efforts to investigate interventions have intensified, particularly those of a task-shifted nature. An overview of these is presented in Table 2.2.

Table 2.2: South African task-shifted psychosocial intervention studies presenting preliminary or finalised mental health outcomes

Reference	**Design**	**Intervention description**	**Study site**	**Sample**	**Outcomes/focus**
Cooper et al. (2009). Improving quality of mother-infant relationship and infant attachment in socio-economically deprived community in South Africa: randomised controlled trial.	RCT[2]	16 home-visits (2 antenatal) up to 5 months post-partum, by community members with 4-month training in basic parenting and counselling skills, as well as delivery of mother-infant intervention aimed at encouraging mothers to be more sensitive and responsive in their interactions with their infants. Weekly supervision from Clinical Psychologist.	Khayelitsha, Western Cape. Participants' homes.	449 Pregnant women (intervention group: 220; control group: 229). 107 lost to follow-up.	*Primary:* mother-infant interactions (6 and 12 months postpartum), infant attachment security (18 months) *Secondary:* maternal depression (6 and 12 months)
	Main Findings *Primary outcome:* Intervention improved quality of mother-infant interactions at 6 months: mean difference=0.77 (SD 0.37), 12 months: mean difference=0.42 (SD 0.18), and less intrusive, at 6 months: mean difference=0.68 (SD 0.36), 12 months: mean difference=−1.76 (SD 0.86), Higher rate of secure infant attachments at 18 months (116/156 (74%) v 102/162 (63%). *Secondary outcome:* Prevalence of maternal depressive disorder not significantly reduced, some benefit in terms of maternal depressed mood at 6 months.				
Reference	**Design**	**Intervention description**	**Study site**	**Sample**	**Outcomes/focus**
Myers et al. (2012). Feasibility and acceptability of screening and brief interventions to address alcohol and other drug use among patients presenting for emergency services in Cape Town, South Africa.	Feasibility and acceptability (F+A)	SBI[3]: 1 on-site session of psycho-education and MI[4] intervention conducted by peer counsellors, with minimum of bachelors-level education. 3 day MI training, 3 half-day booster trainings, biweekly supervision, 16 hours of training about AODs[5], measures, ethics, and procedures.	3 ED[6] services in 2 low-income communities in Cape Town.	30 patients and 10 ED personnel (for F+A[7]). Patients ≥18 years, present with injury and screen at-risk for AOD-related problems.	F+A of SBI in ED services to address AOD use disorders.
	Main Findings Found to be feasible and acceptable (study ongoing). 1458 completed SBI at time of publication, 20.9% at moderate to high risk for AOD use disorder. Of those, 74.8% participated. For F+A, patient follow-up at 3 months post-intervention, 25/30 felt SBI helped reduce AOD use. All 10 ED staff members thought SBI was useful and did not impact on workflow or add to workload. Recommendations were for expanding SBI reach, increased programme visibility, and broader focus. Peer counsellors: buy-in and support from personnel could be improved; lack of private space; difficulty approaching intoxicated patients, and dealing with traumatic nature of ER.				
Reference	**Design**	**Intervention description**	**Study site**	**Sample**	**Outcomes/focus**
Petersen et al. (2012). The feasibility of adapted group-based interpersonal therapy (IPT) for the treatment of depression by community health workers within the context of task shifting in South Africa.	Process and outcome evaluation using non-randomised control group.	12 week IPT[8] group intervention delivered by CHWs with 4-day workshop training, supervised by a Registered Counsellor.	1 CHC in Hlabisa sub-district, northern KZN.	60 HIV clinic service users of ≥18 years. 30 divided into 4 therapy groups, 30 non-treatment control group.	Depression (baseline, upon conclusion of intervention, and 24 weeks after baseline). F+A with 9 participants and 2 CHWs.
	Main Findings Feasible and acceptable. Intervention group showed significant reduction in depressive symptoms. Mean baseline BDI scores for both groups in severely depressed range (34.85 for intervention group and 32.45 for the controls). At 12 and 24 weeks post-intervention, mean BDI scores for intervention participants was in mild range (17.85 and 12.90 respectively). At 12 weeks post-intervention, mean BDI score for control group still in severe range (31.23), and only reduced to the moderate range (26.86) at 24 weeks. Mean HSCL-25 scores for both groups at baseline fell above 1.75 cut-off for psychological dysfunction (2.99 for the intervention participants and 2.64 for the controls). At 12 weeks, intervention participants showed significant improvement in overall psychological functioning (mean HSCL-25 score of 1.85) compared to controls who showed no improvement (mean HSCL-25 score of 2.68). At 24 weeks the mean HSCL-25 score for the intervention participants was below the cut-off for psychological dysfunction (mean HSCL-25 score of 1.60) compared to controls which was still above the cut-off score (mean HSCL-25 score of 2.26).				

[2] Randomised control trial
[3] Screening and brief intervention
[4] Motivational Interviewing
[5] Alcohol and other drugs
[6] Emergency department
[7] Feasibility and acceptability
[8] Interpersonal Therapy

Reference	**Design**	**Intervention description**	**Study site**	**Sample**	**Outcomes/focus**
Le Roux et al. (2013). Outcomes of home visits for pregnant mothers and their infants: A cluster randomised control trial.	RCT	Philani Intervention Programme (PIP): 4 antenatal and 4 postnatal home visits from "Mother Mentors" regarding HIV, alcohol, nutrition, depression, health care regimens for the family, caretaking and bonding, and securing government-provided child grants.	24 areas in Cape Town, participants' homes.	1239 women ≥18 years, but ≤34 weeks pregnant and "at risk" for HIV, alcohol, mental health, and/or nutrition problems	Multiple outcomes across 5 domains: (1) child health status (2) healthcare and monitoring (3) HIV-related preventive acts (4) mental health (5) social support
	Main Findings PIP group outperformed on 7 of 28 outcomes, demonstrating overall better maternal and infant well-being over the first 6 months. No significant differences between groups on depression outcomes or on substance use outcomes.				
Reference	**Design**	**Intervention description**	**Study site**	**Sample**	**Outcomes/focus**
Pengpid et al. (2013). Screening and brief interventions for hazardous and harmful alcohol use among hospital outpatients in South Africa: results from a randomized controlled trial.	RCT	Assistant nurse counsellors delivered 20 minute intervention that included feedback on AUDIT results, psycho-education (oral and leaflet), some aspects of PST.	Dr George Mukhari Hospital, Vhembe district, Limpopo Province.	All outpatients of ≥18 years who screened as hazardous or harmful drinkers on the AUDIT.	Alcohol use disorders.
	Main findings Of 282 hospital outpatients who completed a 12-month follow-up session, time effects on AUDIT scores were significant [F (1,195 = 7.72), P < 0.01] but the intervention effect on AUDIT score was statistically not significant [F (1,194 = 0.06), P < 0.804].				
Reference	**Design**	**Intervention description**	**Study site**	**Sample**	**Outcomes/focus**
Petersen et al. (2014). A group-based counselling intervention for depression comorbid with HIV/AIDS using a task shifting approach in South Africa: A randomized controlled pilot study.	RC pilot study	8 session group-based IPT delivered by lay HIV counsellor with 4 day training, with weekly supervision from clinical psychology trainees for first 2 months and thereafter on monthly basis.	1 ART clinic in PHC in peri-urban area, eThekweni district in KZN	34 people of ≥18 years who are HIV seropositive with comorbid depression: 17 in therapy group, 17 in control.	Depression, psychological dysfunction, and social support.
	Main Findings Depression baseline scores placed both groups in moderate range on PHQ9 (15.18 and 15.47). Intervention group showed significantly greater improvement on PHQ9 at 3-month follow-up (mean difference scores of 8.53 compared to 4.12 in control group). Baseline mean scores for both groups fell above cut-off of 1.75 for psychological dysfunction on HSCL-25 (2.59 for the intervention group and 2.50 for control participants). Significant decline in post-test mean scores on HSCL-25 found for both groups (1.97 and 2.13), though intervention group showed greater improvement. No significant difference on social support measure (MSPSS).				
Reference	**Design**	**Intervention description**	**Study site**	**Sample**	**Outcomes/focus**
Richter et al. (2014). Pregnant women living with HIV (WLH) supported at clinics by peer WLH: A cluster randomized controlled trial.	RCT	8 sessions of Peer Mentor support (Masihambisane): 4 antenatal and 4 postnatal. Peer mentors were WLH who were mothers and had good social skills. 2 month training and weekly supervision.	8 clinics in KZN	602 pregnant WLH in PHC programmes	Multiple outcomes: (1) HIV transmission-related behaviours (2) Infant health status (3) Maternal healthcare and monitoring (4) mental health: depression (5) parenting tasks
	Main Findings Intervention group performed better on 3 of 16 outcomes. Significantly lower levels of depression in study group compared to control at follow up (GHQ). Low retention rate: 87% attended at least one session but only 5% attended all 8 sessions).				
Reference	**Design**	**Intervention description**	**Study site**	**Sample**	**Outcomes/focus**
Sorsdahl et al. (2014). Adapting a blended motivational interviewing and problem-solving intervention to address risky substance use among South Africans.	Acceptability and preliminary outcomes (pre- and post-test).	5 sessions of blended MI and PST intervention delivered by peer counsellors with bachelors-level education, who received 18 hours of MI training and 3 half-day booster training sessions, as well as 12 hours of PST training and additional training in AODs, measures, ethics, and procedures.	3 EDs in Cape Town, Western Cape.	20 participants of ≥18 years and at moderate to high risk of substance-related problems.	*Primary:* Substance-use involvement *Secondary:* Problem-solving styles and depression.
	Main Findings *Primary:* Significant reductions in ASSIST scores at 3-month follow-up [t(14) = 6.66, p < 0.001]. Mean ASSIST score at follow-up was 6.67 (SD = 6.8) and the mean ASSIST change score from baseline was −14.13. *Secondary:* Gains seen on Rational Problem-Solving scale [RPS; t(14) = −3.39, p < 0.001] and reductions in the Impulsive or Careless Style scale [ICS; t(14) = 1.17, p < 0.001]. No differences in symptoms of depression or in problem-solving orientation. Found to be acceptable.				

Reference	**Design**	**Intervention description**	**Study site**	**Sample**	**Outcomes/focus**
Sorsdahl et al. (2015). Feasibility and preliminary responses to a screening and behavioural intervention for maternal mental disorders	Feasibility and preliminary outcomes (pre- and post-test).	Intervention based on '5 As' Smoking Cessation Clinical Practice Guidelines, adapted to address other substances also, delivered by lay HIV counsellors, as well as psycho-education materials.	MOU in low-income peri-urban area in Cape Town, Western Cape.	Pregnant women who present for first visit at MOU. 3 month follow-up: 74 tobacco users; 15 alcohol or other drug users; 70 who screened as depressed.	Alcohol, tobacco and other drug (ATOD) use (wih Fagerström and ASSIST); or scored ≥15 on depression screening measure (EPDS).
	Main Findings Post-intervention and receipt of psycho-education materials: significant reduction in tobacco use (pre-intervention mean 18.160 ± 2.5, post-intervention mean 4.24 ± 1.75, t (73) = 3.45, p\0.001). No significant reduction in alcohol and drug use. Significant reduction in depression scores (pre-intervention mean 18.160 ± 2.5, post-intervention mean 11.94 ± 5.78, t (69) = 8.51, p\0.001). Found to be feasible: MOU personnel felt intervention was useful but reported increase in workload. Lack of referral pathways who need more specialised care. Low disclosure rates of those using AOD.				

There are several studies that are in various stages of pre-implementation that are also worth mentioning. They promise to be highly influential in conceptualising and shaping future intervention models and mental health care policy, as seen in Table 2.3.

Table 2.3: Ongoing studies that incorporate task-shifted psychosocial interventions

Reference	**Study design**	**Sample and site**	**Outcomes/focus**
Africa Focus on Intervention Research (AFFIRM) Lund et al. (2014)	RCT	420 pregnant women will be recruited from 2 MOUs in the Western Cape and screen positive for depression	Depression
	Intervention description Participants who are not randomly assigned to control arm receive manualised intervention comprised of 6 counselling sessions delivered by CHW incorporating PST, psycho-education, behavioural activation and relaxation techniques. CHWs will receive 5 days of training and weekly supervision from social worker.		
Reference	**Study design**	**Sample and site**	**Outcomes/focus**
Comorbid Affective Disorders, AIDS/HIV, and Long Term Health (COBALT) Fairall, Petersen, & Thornicroft (2015)	Cluster RCT	2000 adults who are receiving ART at 40 primary health care clinics in the North West Province will be recruited	HIV-related and ART adherence; depression and alcohol-use
	Intervention description Participants who meet the criteria and who are assigned to intervention groups will receive a group psychosocial intervention delivered by lay-counsellors		
Reference	**Study design**	**Sample and site**	**Outcomes/focus**
Programme for Improving Mental Health Care (PRIME) Lund et al. (2012)	The complexity of the study requires multiples methods of evaluation	General populations accessing primary health care services at various sites in 5 countries: Ethiopia, India, Nepal, Uganda, and South Africa	Various mental health outcomes and priority conditions
	Intervention description The study seeks to generate evidence for the integration of mental health care into primary health care systems via the development of mental health care plans that incorporate evidence-based packages of care. The composition as well as the human resource cadre to deliver these packages of care will be determined by the needs of each site and what is relevant.		
Reference	**Study design**	**Sample and site**	**Outcomes/focus**
Parry et al. (2014)	RCT	325 adults living with HIV/AIDS will be recruited from hospital-based HIV clinics in Tshwane to participate in this three-arm comparison trial	Harmful/hazardous alcohol intake and HIV-related outcomes
	Intervention description Participants will be randomised to a MI-PST intervention group, an equal-attention wellness group, or to a treatment-as-usual group. Interventions will be delivered by health counsellors.		

Reference	Study design	Sample and site	Outcomes/focus
Project MIND Myers et al. (2015)	Cluster RCT	1200 adults who have HIV or diabetes and screen positive for depression and/or risky alcohol use will be recruited from 24 HIV and 24 diabetes clinics	Harmful/hazardous alcohol intake and HIV-related outcomes
	Intervention description The study is investigating a vertical model of service integration to a horizontal model relative to treatment as usual. Participants randomised to the intervention arms will receive 4 MI-PST blended counselling sessions from trained CHWs.		

The significance of these studies lies in several areas, not least of which is in demonstrating academia's response to the need for accessible mental health services that are integrated into primary health care. Despite the very limited number of studies available for review, there are interesting trends worth noting. The emerging patterns in this field of research are reflected in the areas of interest as outlined below.

Study designs

Of the nine articles included in the review, more than half utilised RCT designs (Cooper et al., 2009; le Roux et al., 2013; Pengpid, Peltzer, Skaal, & Van der Heever, 2013; Petersen, Hanass Hancock, Bhana, & Govender, 2014; Richter et al., 2014); one employed a non-randomised control group (Petersen, Bhana, & Baillie, 2012); and, three were feasibility and acceptability studies that made use of qualitative or mixed methods and provided preliminary outcomes using pre- and post-test methods (Myers, Stein, Mtukushe, & Sorsdahl, 2012; Sorsdahl et al., 2014, 2015). This composition of designs is indicative of the relative novelty of this area of study, although the high percentage of randomised controlled trials, especially among the studies in progress, reflects a commitment to the development of robust and rigorously tested interventions.

Even so, while RCTs are considered to be the international gold standard for research, the importance of acceptability and feasibility studies in order to culturally adapt evidence-based psychosocial interventions for mental health should not be underestimated. The recent debates concerning the negative impact of interventions that are not locally relevant, on health outcomes and mental health awareness, serve to highlight the importance of thorough situational analyses that feasibility and acceptability studies provide (Kirmayer & Pedersen, 2014; Patel, 2014). These studies provide researchers with an essential opportunity to assess the appropriateness, cultural relevance and practical applicability of the interventions they seek to test, for the people that they are designed to benefit. Furthermore, the preliminary data

gathered from these studies often provide the basis and rationale for applications to fund more rigorous RCT investigations.

Intervention focus: Prioritised conditions

Since task shifting is intended to provide effective and accessible mental health care to more people, it is reasonable to assume that such interventions should target those disorders that are the most common and that represent the greatest disease-burden. In addition to considering the WHO's list of priority conditions[9], the results of the SASH study (Herman et al., 2009) are also locally relevant to the conceptualisation of appropriate mental health care services. This study found that the lifetime prevalence of common mental disorders (CMDs) was as follows: anxiety disorders, 15.8%; mood disorders, 9.8%, and substance use disorders, 13.3%. It is interesting then to note that – with the exception of the Cooper et al. (2009) study (that had the primary aim of improving the quality of attachment between mothers and infants), the task-shifted studies under review have limited their mental health outcomes to depression or substance use disorders (or both). Four of the studies had substance use disorders as their primary outcomes (Myers et al., 2012; Pengpid et al., 2013; Sorsdahl et al., 2014, 2015) of which two included depression as secondary outcomes; two focused on depression in particular (Petersen et al., 2014; Petersen, Bhana, & Baillie, 2012) and two of the largest studies had multiple general health outcomes, of which mental health was one, specifically, depression (Le Roux et al., 2013; Richter et al., 2014). None of the studies sought to address anxiety disorders directly, despite the fact that they are the most prevalent of the CMDs. None have focused on any other psychiatric illnesses or priority conditions identified by the WHO, nor on broader symptoms of psychological distress.

It is possible that the focus on substance use disorders is due to this condition's strong association with a number of psychiatric symptoms and disorders, including psychotic and mood disorders; a wide range of health problems; it's high prevalence; as well as being implicated in a plethora of psychosocial ills, such as crime and violence (Herman et al., 2009; Kishore & Gopiram, 2014). The focus on depression might be motivated by the widely-cited WHO projection that this disorder will be the leading cause of disability by 2020 (Mathers & Loncar, 2006) underscoring an urgent need for effective and accessible treatment possibilities,

[9] The priority conditions identified by the WHO's mhGAP are depression, psychosis, bipolar disorders, epilepsy, developmental and behavioural disorders in children and adolescents, dementia, alcohol use disorders, drug use disorders, self-harm / suicide, as well as other significant emotional or medically unexplained complaints.

especially for women in the perinatal period. Additionally, the rationale for focusing on these disorders might be lie in both disorders being considered highly treatable (Howard, Molyneaux, et al., 2014; Sadock, Sadock, & Ruiz, 2015).

Intervention target populations

There is a striking interest in the development of services for pregnant women and mothers, with four of the studies aimed at this population (Cooper et al., 2009; Le Roux et al., 2013; Richter et al., 2014; Sorsdahl et al., 2015). The AFFIRM (Lund et al., 2014) and PRIME (Lund et al., 2012) trials are two ongoing studies that are also concerned with this population. This is likely accounted for by the recognition and importance that the United Nation's sustainable development goals have assigned to maternal health (Tsai & Tomlinson, 2012), in addition to the far-reaching implications that mothers' overall well-being will carry for the well-being their children. Two of the three studies that targeted pregnant women specifically considered those living with HIV/AIDS (Le Roux et al., 2013; Richter et al., 2014), while an additional two interventions were aimed specifically at people living with HIV/AIDS (Petersen et al., 2012, 2014). Only two studies included both male and female participants (Myers et al., 2012; Sorsdahl et al., 2014, 2015) and they were focused on substance use disorders. None of the interventions were aimed at children or adolescents, except for the Cooper et al. (2009) study, which sought to facilitate the development of secure attachment styles in the infants. It is possible that the ethical complexities that are inherent to conducting research with minors as subjects is a deterrent to researchers, especially given the relative novelty of task-shifted approaches to mental health.

In light of the WHO's recommendation that mental health is integrated into primary care, there is evidence of a growing interest in developing an evidence base for effective models of integrated collaborative care. In these studies, the focus is expanded to reach more people and is not limited to specific populations. Examples of these include the PRIME study (Lund et al., 2012) and project MIND (Myers, 2015), both currently in progress.

Intervention treatment modalities

While there was some variability in descriptions that researchers provided concerning the interventions used, most used adapted evidence-based modalities that have been endorsed by WHO's mhGAP Intervention Guide (Kirmayer & Pedersen, 2014; Patel et al., 2007; Patel,

Simon, Chowdhary, Kaaya, & Araya, 2009; Petersen et al., 2012; Petersen, Lund, & Stein, 2011; WHO, 2016). Of the nine studies under review, two used Interpersonal Therapy (IPT) (Petersen et al., 2014; Petersen, Bhana, & Baillie, 2012) two incorporated Motivational Interviewing (MI) (Myers et al., 2012; Sorsdahl et al., 2014), one included components of Problem Solving Therapy (PST) (Pengpid et al., 2013), one was a MI-PST blended intervention (Sorsdahl et al., 2014), a further two used peer support or mentoring programmes based on evidence-based programmes (Le Roux et al., 2013; Richter et al., 2014), and one used an attachment theory based intervention (Cooper et al., 2009). Seven of the nine studies clearly described or referred to the use of an intervention manual. The remaining two studies' interventions appear to have been manualised, but this is not made explicit (Richter et al., 2014; Sorsdahl et al., 2014). All were adapted for the particular needs of the target group or the focus problem and the particular context, and all incorporated a psycho-education component intended to raise awareness and understanding of mental health and illness. The number of sessions prescribed and delivered varied substantially between studies, depending on the modality, but all were short-term interventions, with the longest being an IPT group-based intervention of 12 sessions (Petersen, Bhana, & Baillie, 2012).

The mental health care providers

Where human resources were concerned, 'peer' counsellors or mentors were used to deliver four of the studies' interventions (Cooper et al., 2009; Myers et al., 2012; Richter et al., 2014; Sorsdahl et al., 2014); two studies used lay HIV counsellors (Petersen et al., 2014; Sorsdahl et al., 2015); a further two used CHWs (Le Roux et al., 2013; Petersen et al., 2012); while an assistant nurse counsellor was responsible for the provision of the remaining study's programme (Pengpid et al., 2013). The definitions of these particular human resource categories were often vague. Very few studies adequately delineated the general roles, expectations or characteristics of the particular provider utilised. Where the qualities of counsellors were concerned, some studies prioritised level of education, employing counsellors with tertiary level educations (Myers et al., 2012; Sorsdahl et al., 2014), while others sought characteristics that counsellors shared with participants (consistent with the peer counselling approach), for example, HIV status (Richter et al., 2014), originating from the same community (Cooper et al., 2009; Myers et al., 2012; Sorsdahl et al., 2014) or being a mother (Cooper et al., 2009; Le Roux et al., 2013; Richter et al., 2014). The quality of attachment or relationship

between participants and mental health care providers is not explored in any of the studies. Only one made use of a worker situated within the PHC system.

Intervention training and supervision

Again, details concerning this aspect of the studies were often not well described. The type of training that counsellors received was necessarily determined by the kind of intervention provided. Length of training ranged from 12 hours to four months. The details of the training were frequently not reported on and some researchers provided more information than others on how training was conducted and managed. Only two of the studies (Myers et al., 2012; Sorsdahl et al., 2014) provided "booster" training sessions during the course of the intervention's delivery. One study (Petersen et al., 2014) reported using the apprenticeship model of training, a model that has been shown to provide a useful framework for the training and delivery of task-shifted interventions in LMI countries (Murray et al., 2011).

All studies reported having delivered some form of supervision but, again, descriptions thereof varied from study to study. Details regarding the frequency of supervision contact, who the supervision was delivered by, or the format it took were seldom reported on. Furthermore, supervision often appeared to serve the function of monitoring providers and ensuring fidelity to the intervention, and was not commonly referred to as a means of providing emotional support. Descriptions of other methods of ensuring protocol adherence included audiotaping sessions for review by the researcher (Sorsdahl et al., 2014) capturing of data on mobile phones (Le Roux et al., 2013), reviewing attendance records (Richter et al., 2014), and "in vivo" observations of sessions (Pengpid et al., 2013).

Intervention formats and sites of delivery

Despite their cost-effectiveness and social benefits, only two interventions had group formats (both led by the same principle investigator) (Petersen et al., 2012, 2014). The remaining seven studies relied on one-to-one intervention contact. In terms of delivery sites, two of the studies were delivered at participants' homes (Cooper et al., 2009; Le Roux et al., 2013), two at an emergency department at a district level hospitals (Myers et al., 2012; Sorsdahl et al., 2014), one at an outpatients' department at a tertiary hospital (Pengpid et al., 2013), and three at PHC centres (Petersen, Bhana, & Baillie, 2012; Petersen et al., 2014; Richter et al., 2014); and one at a MOU (Sorsdahl et al., 2015). This reflects the versatility of task-shifted interventions as

they can be adapted to be administered in a variety of settings. It also has significant implications for the integration of mental health care into primary and general health, as it means interventions can be designed to suit the needs of particular communities or primary health care centres.

Study outcomes

Outcomes across the nine studies were somewhat mixed. Those intervention studies that focused specifically on the relief of depressive symptoms as the primary outcome found significant improvements as a result of the intervention (Petersen et al., 2012, 2014). Results for those concerned with substance use disorders were less consistent: one reported significant reductions in substance use (Sorsdahl et al., 2014), another reported no statistically significant improvements as a result of the intervention (Pengpid et al., 2013), while a third saw significant reductions in tobacco use but not alcohol or drug use (Sorsdahl et al., 2014). Of some interest, is that the latter found a significant improvement in depressive symptoms, as the study's secondary outcome. Two of the largest studies (Le Roux et al., 2013; Richter et al., 2014) with multiple health outcomes aimed at pregnant women found that their interventions impacted on overall mother and infant well-being, but only one reported significantly reduced depression symptoms (Richter et al., 2014). The study attending to mother-infant interactions (Cooper et al., 2009) found improved quality of interactions between dyads but no lasting reduction in maternal depressive symptoms, also a secondary outcome.

Gaps that non-specialist health workers cannot fill

It is important to recognise that no matter how well-researched, sensitive, or intelligent the design of the intervention protocol, unlike the dispensing of medication, the successful delivery of psychosocial interventions is in many respects dependent on the quality of the relationship between the provider and the patient or service user (Lundahl, Kunz, Brownell, Tollefson, & Burke, 2010). This was not explored in any of the studies. While manualised therapies can provide some means to mitigating the influence of a provider's personality, culture, history or personal experiences, they will never eradicate them. Whether this is in fact desirable to mental health interventions is a discussion that has been neglected in the context of these studies. It is worth noting that Petersen et al.'s (2014) recent review of South African lay counsellor services found that many studies reported suboptimal fidelity to intervention protocol. This finding highlights the need for researchers to pay more attention to human resource categories and to

consider the limitations in capabilities and knowledge that might apply, and that could ultimately represent a threat to the integrity of the intervention. If a psychosocial intervention is only as reliable and effective as the person delivering it, understanding what qualities, characteristics or training make people adequate or appropriate mental health care providers must assume greater centrality to the research (Kohrt et al., 2015). Task shifting is a response to the mandate to deliver equitable services, which must extend to the quality of the service and not simply its accessibility.

Repeatedly, both scholars and practitioners have cautioned against relying on simply shifting tasks from specialists to non-specialists in order to remedy the treatment gap (Bhana, Petersen, Baillie, Flisher, & The Mhapp Research Programme Consortium, 2010; Freeman, 2016; Lehmann, Van Damme, Barten, & Sanders, 2009; WHO, 2007). The accessibility of mental health treatments cannot come at the expense of quality of care, which is at risk if human resources are not adequately trained, supported and supervised (Petersen et al., 2012). To this end, the WHO clearly advocates restructuring healthcare systems to accommodate new cadres of human resources to successfully integrate mental health into primary care and shift tasks appropriately and effectively (Kakuma et al., 2011; WHO, 2008; WHO, 2012). To date, task shifting research has largely made use of CHWs or other NSHWs, frequently with positive outcomes (Petersen, Lund, & Stein, 2011). However, these resources often have little to no background training or experience in mental health, potentially compromising treatments with inferior care (Lehmann et al., 2009; Petersen et al., 2012). While there can be little argument against the appropriate use of NSHWs in the delivery of certain interventions, this approach cannot be expected to serve as a substitute for professional mental health services. Currently, the effects of using human resources without mental health training are likely mitigated by the fact that interventions are delivered in the context of funded and controlled effectiveness studies, overseen by experts and specialists. Under these conditions the training, supervision and general performance of NSHWs can be carefully attended to, in ways that might not be realistically achievable in existing healthcare systems, which are already overburdened and under-resourced. A fully integrated model in real world settings has not yet been tested.

2.4.4 The gap that Registered Counsellors might fill

In this section, the following question will be answered: *What is the RC category and what role might this cadre play?* The foundational skill sets required to proficiently deliver quality interventions have not been explored in task shifting research. To date, more emphasis has been

given to the mechanics of the interventions themselves. Very little is known about what qualities make particular interventions successful, especially when it comes to the human resources employed to deliver services. It seems clear, however, that the expertise gap between community health workers and specialists is simply too wide. The introduction of a mid-level tier of human resources is essential to the successful development and delivery of task shifted mental health services (Freeman, 2016; Petersen et al., 2012). In South Africa, Registered Counsellors (RC) may represent the best qualified and equipped cadre of worker to bridge that gap.

Identifying candidate core competencies

In 2009, the Institute of Medicine's (IOM) Forum on Neuroscience and Nervous Systems Disorders and UNAS' Forum on Health and Nutrition convened an international workshop to generate debate and discussion about ways in which mental health's human resources might be strengthened so as to improve care for people living with MNS in sub-Saharan Africa. The need for the development of a diverse network of mental health workers was identified and so a second workshop was held in 2012. These discussions were focused on the development of "candidate core competencies" to ensure the effective delivery of services in the management of MNS disorders, specifically four conditions: depression, psychosis, epilepsy, and alcohol use disorder (IOM, 2013).

Here, competency was defined as "the ability of the individual worker, based on his or her acquired knowledge and skills, to deliver an intervention to a desired performance standard" (p.4) (IOM, 2013). Care providers were grouped into four primary categories, namely (1) community/lay workers; (2) non-specialised, non-prescribing practitioners; (3) non-specialized prescribing practitioners; and (4) specialised practitioners. The definition for each type of provider was adapted from the WHO health worker classification chart (WHO, 1992), with acknowledgement for the limits that might apply to each category's abilities or scope of practice. Basic competencies across all categories were listed as engaging patients, assessing mental and neurological health and suicide risk, providing accurate information, making appropriate treatment decisions, and knowing when to refer to a higher levels of care. Specific competencies for dealing with MNS disorders were compiled and tabulated for each human resource category, delineating the skill sets required to perform certain tasks and deliver particular interventions. Specifically, the mid-level tier of *non-specialised, non-prescribing practitioners* are tasked with the recognition, identification and referral of individuals who are

in need of further assessment and care (IOM, 2013). In addition to meeting this competency requirements, RCs are also trained to provide therapeutic interventions (Elkonin & Sandison, 2006), making them well-placed to perform the duties of this category, as can be seen by the legislated scope of practice described below (Department of Health, 2011).

Background to the Registered Counsellor category

In alignment with the WHO's definition of task shifting, the creation of a class of non-specialist health worker in the form of the Registered Counsellor (RC) category might be seen as one of South Africa's earliest formal endeavours to employ a task shifting model in the field of mental health. It is a category of mental health professional that was in development from 1997, and finally established in 2003 by the Health Professions Council of South Africa (HPCSA), in conjunction with the Department of Health (Elkonin & Sandison, 2006). It was conceived of as an important and much needed response to the poor state of South African public mental health services post-1994, where the services available at the time were primarily focused on treatment of severe mental illness. Little to no psychological assistance or support was available to non-psychiatric or at-risk populations – this kind of help was mostly to be found in the private sector, where services were unaffordable (and as a result, inaccessible) to the majority of South Africans (Duncan, Bowman, Naidoo, Pillay, & Roos, 2007). Having identified this gap, it was reasonable to assume – since secondary and tertiary treatment services already existed in public health in the form of psychologists and psychiatrists (even though these services were and continue to be limited) – that a new category of mental health professional with less training, working at a primary curative level with a focus on prevention, and with sensitivity to socio-cultural diversity, would best serve South African communities' mental health needs (Abel & Louw, 2009; Pillay, Ahmed, & Bawa, 2013). The rationale was not to replace psychologists, but to supplement these services with professionals who could provide appropriate interventions to people who had suffered from the traumas of life, and identify those in need of specialist care (Pretorius, 2012). Similar programmes were introduced in Botswana and Namibia (Plattner & Moagi-Gulubane, 2010).

Registered Counsellor training

RCs hold the Bachelor of Psychology (BPsych) degree qualification, which is at Level 8 of the South African Qualifications Authority's (SAQA) National Qualifications Framework (NQF-8 or Honours equivalent) (Abel & Louw, 2009). The degree was designed to equip recipients

with psychology-specific knowledge regarding theory and application. Some humanities modules are included in the first two years of the programme, where after the focus shifts almost entirely to psychology subjects, which might include human development, counselling theory and practice, community psychology, psychopathology, and neuropsychology, depending on the composition of individual institution's South African Qualifications Authority (SAQA) certification. Across the board, programmes are required to include a research component with a dissertation, as well as a six-month, full-time supervised internship as part of the training (HPCSA, 2009). Once all academic and practicum requirements have been met, graduates are required to pass the National Board Exam in order to register with the HPCSA as a Registered Counsellor. At last count, there were 1991 RCs registered with the HPCSA (Rouillard, Wilson, & Weideman, 2015).

Currently, of the 11 tertiary academic institutions accredited by the HPCSA (2015) to offer the degree, six have active programmes, two of which are private institutions (South African College of Applied Psychology, or SACAP [2016] and Cornerstone). The state-funded universities include the University of Limpopo (University of Limpopo, 2016), the University of Venda (University of Venda, 2016), Walter Sisulu University (WSU, 2016), and Nelson Mandela Metropolitan University (NMMU, 2016). Several other state-funded universities have discontinued their BPsych programmes and allowed their accreditation to lapse, citing a lack of posts available to graduates, especially in public health settings (Elkonin & Sandison, 2006). One possible explanation for this is that the category was introduced somewhat prematurely: before the restructuring of public health could adequately accommodate the new roles that RCs might bring to an integrated primary healthcare system. However, the category's scope of practice, as outlined below, offers to bridge the gap between specialist and NSHW skills, warranting further investigation.

Registered Counsellor scope of practice

In 2011, the scope of practice of Registered Counsellors was revised by the South African National Department of Health to include the following acts (Department of Health, 2011):

i) psychological screening, primary mental status screening, basic assessment, and psychological interventions with individuals aiming at enhancing personal functioning;
ii) performing psychological assessment excluding projective, neurological and diagnostic tests;
iii) enhancing personal functioning; performing supportive, compensatory, and routine psychological interventions;

iv) identifying clients requiring more sophisticated or advanced psychological assessment and referring such clients to appropriate professions;

v) participating in policy formulation based on various aspects of psychological theory and research; participating in the design, management, and evaluation of psychologically-based programmes in the organisations including but not limited to health, education, labour, and correctional services;

vi) training, and supervising other registered counsellors and practitioners; conducting psychological practice and research in accordance with the Ethical Rules of Conduct for Practitioners registered under the Health Professions Act, 1974; adhering to the scope of practice of registered counsellors;

vii) conducting, and reporting on research projects; and

viii) providing expert evidence and/or opinions (Department of Health, 2011, p.2)

Notably, while RCs are given thorough training in psychopathology and diagnostic systems, formally diagnosing mental illness falls outside of the category's scope of practice. This training is intended for the purposes of symptom recognition and referral to appropriate resources. It means that in addition to providing counselling services, RCs are ideally suited to perform mental health triage; acting as "emotional paramedics" (Pretorius, 2012). While the scope of practice is limited by comparison, they are less expensive to train and employ than psychologists. In addition to having substantially more training in the delivery of psychological interventions than CHWs do, their registration with the HPCSA means that they can be held accountable for their professional actions. The monitoring of CHWs is unregulated and the utilisation of this cadre to deliver mental health interventions without appropriate professional oversight represents a potentially grave ethical problem.

Research concerning Registered Counsellor category

Despite its promise, very little research has been conducted on the role that this category of mental health professional might play in delivering interventions at primary care level. A review of the literature reveals that, to date, only five articles (Abel & Louw, 2009; Elkonin & Sandison, 2010; Elkonin & Sandison, 2006; Preez & Roos, 2008; Rouillard et al., 2015) directly concerning RCs have been published, in addition to one unpublished conference paper (Kotze & Carolissen, 2005). Most of this research has simply sought to track the progress of students post-graduation. For example, Kotze and Carolissen (2005) presented findings from their study at the 11th South African Psychology Conference in Cape Town. Their data showed that only 15% of the 69 BPsych graduates until that time from the University of Stellenbosch and the University of the Western Cape were employed as counsellors, none of which were employed in the health sector. Similarly, Elkonin and Sandison (2006) interviewed 62 of the

84 students who had graduated between 2002 and 2004 from NMMU's programme. They found that only 16 had written the Board Exam; 12 had registered with the HPCSA; 6 were working in the profession; and, 19 were pursuing a Masters' degree in Psychology. Accessing the HPCSA's register of 256 RCs registered at that time, Abel and Louw (2009) found that the situation had improved slightly by that time, with 46% of the sample of 82 RCs actually working in their chosen field. All three studies cited similar reasons for the poor progress of the RC category. These primarily included a range of administrative and bureaucratic problems associated with professional registration; a lack of public awareness of the category; and most significantly, a lack of employment in field (Elkonin & Sandison, 2006).

Elkonin and Sandison (2010) conducted a qualitative study exploring the perceived efficacy of trainee Registered Counsellors during their practicum at NMMU. Fifteen supervisors or practicum placement managers were interviewed about their overall impressions of the services provided by RC interns. There was consensus among participants that RCs were well-skilled and demonstrated all the core competencies required of the category, as set out by the HPCSA (Elkonin & Sandison, 2010). Most recently, with reference to the challenges faced by this category to fulfil its professional mandate, Rouillard et al. (2015) explored the perceptions that RCs have of their role in the provision of mental health care services in South Africa. Data from interviews with 12 RCs showed that RCs were eager to deliver services, but unclear on their role, and frustrated by the lack of work opportunities.

Despite the fact that leading academics and researchers in public mental health have repeatedly advocated for the utilisation of this category of mental health professional in public health settings (see for example Bhana et al., 2010; Cooper, 2014; Lund, Petersen, Kleintjes, & Bhana, 2012; Lund, Kleintjes, et al., 2010; Petersen & Lund, 2011; Petersen et al., 2012; Pillay, Ahmed, & Bawa, 2013), at the present time, none of the research outputs concerned with RCs has investigated the feasibility of the category in public mental health services: the very reason for its establishment. Among those in the field, there appear to be two camps of thought: those who feel that the category has floundered and failed to live up to its expectations; and those who see it as a wealth of potential waiting to be mined. As such, it is particularly important to investigate the acceptability and feasibility of utilising RCs in the delivery of effective interventions within the primary health care setting.

2.4.5 Using evidence-based treatments in task-shifted interventions

Here, the following two question will be addressed: *What role do evidence-based treatments play in task shifting interventions?* And, *how effective is Problem Solving Therapy (PST) as a task-shifted intervention for perinatal mental illness?* Locally and internationally, the utility of evidence-based treatments within a task shifting model as cost-effective approaches to the prevention and management of mental illness is increasingly being highlighted (Fulton et al., 2011; Ginneken et al., 2011; Lund, Petersen, Kleintjes, & Bhana, 2012; Patel et al., 2009; Petersen, Bhana, & Baillie, 2012; Petersen, Bhana, & Swartz, 2012; Rochat et al., 2011). The global mental health movement's drive to redress inequalities in mental health care and reduce the treatment gap incorporates efforts to ensure that only effective and empirically-supported treatments are employed (Kirmayer & Pedersen, 2014). The evidence-based practice (EBP) directive is important, especially in light of growing support for task shifting models. Ensuring that task-shifted psychotherapies and interventions are grounded in sound research is essential to safeguarding quality and ethical care. The definition of evidence-based practice in mental health varies. Most researchers agree that these interventions are supported by reliable and replicable scientific research to consistently show improved outcomes (Drake et al., 2001; Kazdin, 2014a). They are "those psychological interventions that have been shown by means of empirical research to reduce symptomatology and increase functioning among clients, at a rate that is beyond what would have occurred by chance" (Kagee & Lund, 2012, p.103).

This does not negate the need for practice-based evidence: the understanding of what makes an intervention work within a given context (Wand, White, & Patching, 2010). Given that there are currently approximately 320 psychosocial therapies and interventions that qualify as evidence-based (Kazdin, 2014a), understanding the mechanisms that make an intervention appropriate for the population it is intended is essential. In fact, the adaptability of interventions to differing contexts is reliant on practice-based evidence. This can only be done when thorough and thoughtful attention is given to the socio-cultural circumstances and environments in which people live (Kirmayer & Pedersen, 2014; Whaley & Davis, 2007). The WHO's *Mental Health Action Plan 2013-2020* exhorts: "Mental health strategies and interventions for treatment, prevention and promotion need to be based on scientific evidence and/or best practice, taking cultural considerations into account" (WHO, 2013, p. 32). Establishing which interventions are best suited, as well as how they might be meaningfully

adapted to local contexts is central to their efficacy and traction among mental health care recipients.

Mental Health Gap Action Programme (mhGAP)

A substantial body of work exists describing psychosocial interventions that have been shown to be effective in the treatment of mental illnesses (Kazdin, 2014a). The WHO's recognition of the importance of using this empirical evidence to inform the development of programmes that could effectively address the LMI countries' treatment gap crisis led to the development of the action programme, known as *mhGAP* (WHO, 2008a; 2015). Updated in 2015, *mhGAP* provided a set of guidelines for health planners and policy-makers, so as to accelerate the scaling up of services to treat MNS disorders. It identified priority conditions that require the most urgent attention in that they represent the largest burden in terms of mortality, morbidity or disability; as well as those that are associated with elevated economic costs, or human rights violations. These priority conditions are depression, psychosis, bipolar disorders, epilepsy, developmental and behavioural disorders in children and adolescents, dementia, alcohol use disorders, drug use disorders, self-harm / suicide, as well as other significant emotional or medically unexplained complaints (WHO, 2008a; 2015).

Based on *mhGAP*, an integrated package of evidence-based interventions was developed for the prevention and management of each priority condition, and this took the form of the *mhGAP Intervention Guide for mental, neurological and substance use disorders in non-specialized health settings, Version 2.0* (mhGAP-IG) (WHO, 2016). In addition to promoting good clinical practice by presenting requirements for general principles of care, mhGAP-IG provides a master flow chart that allows the health worker to conduct an informed assessment of the service user and make logical decisions about condition treatment and management. Depending on various factors related to the condition, such as symptom severity, a range of evidence-based, cost-effective psychosocial interventions are recommended and described for implementation. The package provides templates of adaptable treatments and psychosocial interventions, taking context-related variances into account, including existing barriers. Where human resources are available, the guide recommends "advanced psychosocial interventions" (WHO, 2010, p.83). These are interventions that are traditionally delivered by specialists but that have been successfully implemented in task-shifted models by NHSWs. These include interpersonal psychotherapy (IPT), motivational enhancement therapy, contingency management therapy, social skills therapy, family therapy, and parenting skills, as well as a

variety of cognitive behavioural therapies (CBT) and techniques such as behavioural activation, relaxation training, and problem-solving therapy (PST). Importantly, while the evidence base for these therapies is relatively substantial, most of the research has been conducted in well-resourced countries, by specialists, in the contexts for which they were designed. As shown earlier in the review of South African task shifting, the data supporting the adaptation of these interventions to other contexts, especially in task-shifted formats is very limited.

Problem-solving therapy as an evidence-based treatment

As one of the WHO's *mhGAP*-recommended treatments (WHO, 2016), PST in particular has garnered significant support as an easily adaptable, user-friendly and accessible modality (Chibanda et al., 2011; Cuijpers, van Straten, & Warmerdam, 2007; Gellis & Kenaley, 2007; Patel et al., 2009). PST is a brief, evidence-based, cognitive-behavioural intervention designed to improve problem-solving skills and coping (D'Zurilla & Nezu, 1999; D'Zurilla et al., 2002). Since it follows clearly defined steps that are simple to teach and easy to manualise; the risk of intervention drift is decreased and fidelity to the protocol is better facilitated. PST is grounded in D'Zurilla et al.'s (1998) theory of social problem solving, where the term 'social problem solving refers to "the process of problem solving as it occurs in the natural environment or 'real world'" (D'Zurilla, Nezu, & Maydeu-Olivares, 2004, p. 11). D'Zurilla and Goldfried (1971, cited in D'Zurilla et al., 2004) describe problem-solving as a cognitive-behavioural process that generates a range of potential solutions to a problem, before increasing the likelihood of choosing one that will be the most effective.

According to D'Zurilla et al. (2004), the ability to problem-solve is comprised of two components, namely, problem orientation and problem-solving skills (or problem-solving style). *Problem orientation* is defined as "a metacognitive process involving the operation of a set of relatively stable cognitive-emotional schemas that reflect a person's general beliefs, appraisals, and feelings about problems in living, as well as his or her own problem-solving ability" (D'Zurilla et al., 2004, p. 14). *Problem-solving skills* refer to the cognitive and behavioural activities used to understand a problem and find effective ways of coping with it, requiring five major processes: defining and formulating the problem; generating alternative solutions; deciding on the solution to implement; and, implementing and verifying the effectiveness of solution (Nezu & Nezu, 2001).

According to D'Zurilla et al. (2004), the model was further developed to classify individuals' problem-solving abilities according to their *problem-solving orientation* (either positive or negative), as well as by the dominant of three possible *problem solving styles* (rational style, impulsivity-carelessness style, and avoidance style). Maladaptive problem solving exists when individuals have a negative problem orientation and an impulsive-careless or avoidant style of problem-solving. A *rational* problem solving style is defined as a constructive approach that is deliberate and systematic in its application of problem-solving skills. The *impulsivity-carelessness* style employs problem-solving strategies in hurried, careless and inadequate ways. Generally, a person with this dominant style will consider very few solutions and often impulsively applies the first that comes to mind. An *avoidance* problem-solving style is typified by procrastination, passivity, and inaction. An individual with this dominant style frequently avoids problems in the hope that they will spontaneously resolve, and may shift the responsibility for problem-solving to others (D'Zurilla at al., 2004).

Problem-solving therapy is based on the idea that the capacity for social problem-solving significantly mediates the relationship between stressful life events and experiences, and psychological well-being (Bell & D'Zurilla, 2009). It is a strategy that teaches people more effective management of stressful life situations by focusing on changing the problem or the maladaptive response to the situation, or both (Nezu & Nezu, 2001). D'Zurilla and Nezu (2007) present a comprehensive generic PST manual incorporating 14 modules that can be adapted and tailored for different populations and purposes. The manual's focus is on principles of general behaviour change and resists a prescriptive approach to implementation (D'Zurilla & Nezu, 2010). These modules and their corresponding objectives and activities are summarised in D'Zurilla and Nezu (2010), with the first three modules concerned with introducing the model to the client, assessing the stressful areas of the client's life, and identifying the obstacles to effective problem solving. The following six modules are concerned with problem-orientation and are comprised of objectives such as fostering self-efficacy and positive problem orientation; using feelings to recognise problems when they occur; challenging negative thinking and dysfunctional attitudes; developing an understanding of the role of emotions in problem-solving; teaching techniques that inhibit impulsivity and avoidance behaviours; and helping the client to develop more realist problem-solving goals and strategies. The next three modules are focused on fostering the client's creative capacity for generating possible solutions; effective decision-making; and ability to implement and evaluate the effectiveness of the chosen solution. The remaining two modules are focused on maximising proficient

problem-solving attitudes and skills, and teaching the client a rapid problem solving model that can quickly be implemented. Recommendations for how the modules might be incorporated into structured and time-limited formats are also provided, along with a variety of exercises and activities (D'Zurilla & Nezu, 2007, 2010).

A substantial base of empirical evidence supports the efficacy of this approach for the treatment of a wide-range of mental health and health problems (Malouff, Thorsteinsson, & Schutte, 2007). Evidence suggests that PST is an effective treatment for several common mental disorders including mood (Bell & D'Zurilla, 2009; Cuijpers et al., 2007), anxiety (den Boer, Wiersma, & Van den Bosch, 2004), psychological distress (van t'hof, Stein, Marks, Tomlinson, Cuijpers, 2011), and substance use disorders (Jaffee & D'Zurilla, 2009; Sorsdahl et al., 2014) in a broad range of sociocultural settings (Chowdhary et al., 2014; Pierce, 2012). It has also been used to support people who have cancer, diabetes, obesity, and chronic headaches (D'Zurilla & Nezu, 2010). It has been adapted for a wide range of populations and age groups, including the elderly, criminal offenders (Gellis & Kenaley, 2007) and pregnant women (Sampson, Villarreal, & Rubin, 2016), using different formats (groups, families, individuals and couples) (D'Zurilla & Nezu, 2010). Several systematic reviews of PST have been conducted. A meta-analysis of 31 studies found that PST leads to significant reductions in mental health symptoms and is more effective in reducing these problems than treatment as usual or attention-control interventions (Malouff, Thorsteinsson & Schutte, 2007). A review of 22 studies of PST for depression in adults found mixed evidence for PST alone but more favourable outcomes when combined with anti-depressant treatment (Gellis & Kenaley, 2007). Similarly, Cuijpers et al.'s (2007) meta-analysis of 13 studies of PST for depression found that most studies had results that supported this treatment, but effects varied considerably between studies. All the studies considered in these reviews were conducted in high income settings.

In LMI settings, given its adaptability and portability, interest in PST as a cost-effective intervention that can readily be task-shifted from specialist health professionals to non-specialist staff has grown (Abas et al., 2016; Chibanda et al., 2014; Chibanda et al., 2011; Sorsdahl et al., 2014; van't Hof, Stein, Marks, Tomlinson, & Cuijpers, 2011). While the evidence is still limited, it shows promise. For example, in Zimbabwe, Chibanda et al. (2011) trained 10 lay workers to deliver an adapted PST intervention to 320 adults who screened positive for CMD symptoms. A significant decrease in CMD symptoms was noted after three to six PST sessions. A recent follow-up study of the same intervention found high acceptability

among service-users and workers (Abas et al., 2016). In South Africa, an adapted PST programme was delivered to 103 participants in low-income communities who were experiencing psychological distress (van't Hof et al., 2011). Seventy-three participants completed a five-week PST self-help programme in either workshop or booklet format. Levels of psychological distress dropped significantly post-intervention and the programme was positively evaluated. Sorsdahl et al. (2014) had peer counsellors deliver a blended motivational interviewing and PST intervention to 20 South African participants screened as at-risk for substance abuse. They found significantly reduced substance use at the three-month follow-up. Most notably, a study conducted by Chibanda et al. (2014) compared depression outcomes between two groups of women at six weeks postnatal. Women were randomly assigned to a group PST intervention delivered by trained peer counsellors, or to a group receiving amitriptyline. At weeks post-intervention, the depression scores from the PST group were significantly lower than those receiving the antidepressant (Chibanda et al., 2014).

Given the comparatively recent recognition of the gravity of maternal mental illness, in LMI countries (Fisher et al., 2012); as well as the innovative nature of the task shifting model in mental health, there are extensive gaps in our knowledge: first, no systematic research has been conducted regarding the feasibility, acceptability and efficacy of interventions delivered by Registered Counsellors. Second, exceptionally limited research has been conducted on the efficacy of task-shifted evidence-based interventions for pregnant women. Finally, while evidence from South Africa reveal that PST may be an effective intervention for reducing psychological distress and depression (Sorsdahl et al., 2014; van't Hof et al., 2011), to the best of our knowledge there have been no studies examining the feasibility or effectiveness of PST for reducing depression in the perinatal period. As such, Chapter 5 seeks to answer the following question:

Is a modified PST intervention to reduce symptoms of psychological distress (CMD) among women presenting for antenatal care in primary health care settings, delivered by a Registered Counsellor, feasible and acceptable; and, what are the preliminary mental health outcomes of said intervention?

2.5 Conclusion

The purpose of this chapter was to provide a context of the existing knowledge within which the current study's research questions are nested. A number of questions were posed and it was

noted that while some answers are available, many questions remain unresolved. In this way, the gaps in the literature were highlighted, while outlining the ways in which the current study might fill those gaps. The next chapter addresses the first research question posed in this review, namely: What is the prevalence rate of psychological distress during pregnancy among women who receive antenatal care at primary health care centres, and what are the associated risk factors?

CHAPTER 3

PSYCHOLOGICAL DISTRESS DURING PREGNANCY:

PREVALENCE AND RISK FACTORS

3.1 Background

The first research question presented in Chapter 1 sought to investigate the prevalence rate of psychological distress among pregnant women receiving antenatal care at primary health care centres, as well as the associated risk factors. The Literature Review (Chapter 2) describes findings from related studies. A brief summary of this review is presented here.

Similar to studies conducted in high-income countries (Gavin et al., 2005) South African data regarding the prevalence of perinatal mental illness are limited and also vary widely. A study conducted in Soweto found that 16.4% of the study's participants were screened as 'probable cases' of postnatal depression (Ramchandani et al., 2009). Hartley et al. (2011) found that as many as 39% of women in two peri-urban communities in Cape Town reported experiencing depressed mood during pregnancy. Similarly, a study investigating risk factors during pregnancy found depressed mood in 37% of their sample of 1145 pregnant women from 24 townships across Cape Town (Tomlinson et al., 2014). More recently, Brittain et al. (2015) found prevalence rates for depressive symptoms to be at 21% among a sample of 726 pregnant women attending one of two primary health care clinics in the Western Cape. In rural areas, the prevalence may be even higher, with 47% of the 109 participants in one study clinically assessed as being depressed (Rochat et al., 2011). Variances in these studies' results are most likely due to the employment of a range of convenience sampling methods, a variety of tools and measures, leading to results that are difficult to generalize to the greater Cape Town area. Furthermore, it is important to note that studies of perinatal CMD prevalence employ various case definitions of CMDs, as well as

A number of studies have attempted to investigate the factors associated with perinatal mental illness. For example, (Fisher et al., 2012) systematic review of perinatal mental illness in LMI contexts found that socio-economic deprivation was the factor most widely associated with risk for mental illness. Other significant risk factors included, intimate partner relationship difficulties, physical abuse during pregnancy, poor postpartum social support, adverse

reproductive events (such as unwanted or unintended pregnancies and past pregnancy losses), past psychiatric illness and "less specific" psychological symptoms during pregnancy (Fisher et al., 2012). Sawyer, Ayers, and Smith's (2010) systematic review of 35 studies conducted in African settings found no connection between adverse reproductive experiences and antenatal depression, but some evidence of a correlation postnatally. This review also found a strong connection between risk and poor social support from family and partners in both the ante- and postnatal periods. Furthermore, previous experience of mental illness or psychological symptoms were also implicated (Sawyer et al., 2010).

In South Africa, data regarding risk factors for perinatal mental illness are still emerging, especially risk factors for psychological distress. One prospective study conducted in Soweto by Ramchandani et al. (2009) sought to identify the antenatal risk factors of postnatal depression with a sample of 1035 pregnant women who were interviewed during pregnancy and then completed the Pitt Depression Questionnaire in the postnatal period. The two strongest predictors found were extreme societal stressors associated with experiencing or witnessing a traumatic event, and difficulties with intimate partner relationships (Ramchandani et al., 2009). Risk factors for postnatal depression found in other studies include perceived stress (Vythilingum & Roos, 2012); unplanned and unwanted pregnancy, poor partner support, and the father's negative attitude towards the child (Tomlinson et al., 2004). South African studies that sought to identify predictors of antenatal depression found that the strongest predictors were not dissimilar to those found in the postnatal period, namely poor partner support, economic deprivation and exposure to domestic violence (Hartley et al., 2011), as well as single marital status, unplanned pregnancy, recent stressful life events, childhood trauma, and the experience of intimate partner violence in the last 12 months (Brittain et al., 2015).

South African studies have largely limited their focus to symptoms of depression, especially during the postpartum period. As such, the prevalence and predictors of antenatal psychological distress remain poorly understood. A better understanding of a broader range of symptoms associated with antenatal CMDs is lacking. The current study sought to further investigate the prevalence of, and predictors for, psychological distress in the antenatal period.

3.2 Methods

This study made use of secondary data from a larger study (Petersen Williams, Jordaan, Mathews, Lombard, & Parry, 2014) that investigated alcohol and other drug (AOD) use among

pregnant women who presented for antenatal care at public health centres in Cape Town, South Africa. The study was conducted by the Alcohol, Tobacco and Other Drug Research Unit, at the Medical Research Council.

Data were collected via interviewer-administered questionnaires as well as biological measures (urinalysis) of AOD use (see Petersen Williams, Jordaan, Mathews, Lombard, & Parry, 2014). The methodology relevant to the collection of data for the purposes of this chapter is outlined below.

3.2.1 Study Setting and Population

The study focused on pregnant women attending any of all 11 Midwife and Obstetrics Units (MOU) at primary healthcare centres across eight health sub-districts in greater Cape Town. MOUs are based in communities and managed by midwives, operating under the mandate of the Western Cape (provincial) Department of Health. Eighty-four per cent of the South African population are dependent on government funded health services such as these (Benatar, 2013). At the first visit to the MOU, a full initial assessment of the pregnant woman is conducted. Regular antenatal follow-up visits are arranged to monitor the pregnancy. Facilities for delivery and postnatal care are also available. When necessary, referrals specialist care are made (Petersen Williams et al., 2015).

3.2.2 Design and Sample Selection

The second stage of a two-stage cluster survey design was used to collect data from pregnant women attending their first antenatal visit at any of the 11 MOUs. Figure 3.1 (Petersen Williams et al., 2014) details the sampling and recruitment process. The first stage of the survey collected data about self-reported alcohol and drug prevalence. To determine the number of first antenatal visit patients from each MOU to be screened, total clinic attendance numbers between the beginning of January 2007 and end of December 2008 were used (N = 41 715), the two years prior to the study's planning and execution. Proportional sampling allocation was then implemented across the 11 MOUs. The sampling fraction varied between 10% and 15%, and overall at approximately 12.5% (n = 5 231) of the population. To achieve the broader study's objectives regarding the prevalence of drug and alcohol use by urinalysis, a second stage subsample was selected from the group of pregnant women identified at the first stage.

In addition to undergoing urine testing, the sub-sample of women also participated in a detailed interview, from which the data used in this paper was generated.

This second stage sampling occurred immediately, using unequal probability sampling by stratifying the screened participants into three distinct groups. The groups were determined by participants' reporting in the first stage: women who reported any drug use (regardless of alcohol use) were assigned to Stratum A; those who reported alcohol use only, Stratum B; while those who reported no AOD use were assigned to Stratum C. An adequate sample size for the drug group was ensured by selecting all the women allocated to Stratum A. Systematic random sampling techniques were used for the larger stratums B and C. Every 10^{th} observation from Stratum B (alcohol only) and every 5^{th} from Stratum C (no AOD) were sampled. Although the decision to sample the 5^{th} and 10^{th} observations was arbitrary, a degree of underreporting was expected to reduce the no AOD group, and so more women from Stratum C than B were recruited (Petersen Williams et al., 2014).

3.2.3 Measures

The data of interest to this paper was derived from the interviewer-administered questionnaires (Appendix I) at stage two and concentrated on socio-demographic and obstetric variables; social support variables; self-reported substance abuse; and symptoms of psychological distress.

Demographics

A range of demographic data were collected from participants including highest level of education, employment status, race, and relationship status. Data pertaining to participants' pregnancy experiences concerned the number of previous pregnancies, whether or not the current pregnancy was planned, as well as how advanced the pregnancy was. Socio-economic status was determined by asking participants about access to amenities such as electricity in the home, or household items such as a radio, television, telephone, fridge, computer, washing machine, and cell phone. Access to four or less items was considered to indicate low socio-economic status, and five or more items high SES (Morojele et al., 2010).

Self-reported symptoms of psychological distress

The World Health Organisation's (1994) Self-Report Questionnaire (SRQ-20) is a 20-item screening tool that was developed for primary health care settings that are without mental health services, in low- and middle-income countries. It was designed to screen for 'mental distress' expressed as symptoms associated with a range of CMDs, specifically the neurotic disorders, including depressive disorders, anxiety-related disorders, and somatoform disorders. A cut-off value of >8 was used to determine caseness, producing the binary categories of 'high' ($\geq$8) and 'low' ($\leq$7) symptoms of psychological distress (Baumgartner et al., 2014; Stewart, Umar, Tomenson, & Creed, 2014). The SRQ-20 has repeatedly been shown to have satisfactory sensitivity and specificity, with high convergent validity (Hanlon et al., 2008). Husain et al (2014) also found that the SRQ-20 performed better than the Edinburgh Postnatal Depression Scale (EPDS) in low-income settings.

Social support

The Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet, & Farley, 1988) used in this study is a 12-item scale that asks participants about their current perceptions and experiences of being supported or assisted by family members, significant others, and friends. Participants can provide one of a range of 7 responses, from "strongly agree" to "strongly disagree" to statements such as "my family really tries to help me" and "there is a special person in my life who cares about my feelings".

Self-Reported Substance Use

The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST), an 8-item screening questionnaire – also developed by the WHO – was used to investigate self-reported substance use (Humeniuk, Henry-Edwards, Ali, Poznyak, & Monteiro, 2010). A Specific Substance Involvement Score can be obtained for each substance, which reflects hazardous, harmful, or dependent use of alcohol, tobacco, and other psychoactive substances used, over three months prior to the interview. Scores of three or less (10 for alcohol) indicate lower risk of problems related to substance use, while scores between 4 (11 for alcohol) and 26 reflect moderate risk, and 27 or higher: high risk (Humeniuk et al., 2010). For the purposes of the current study, only tobacco and alcohol involvement scores were considered. As part of the

larger study, illicit substances were also considered and participants underwent urinalysis, the results of which have been published elsewhere (see Petersen Williams et al., 2014).

3.2.4 Study Procedure

Data were collected over two periods at all sites except one (where data collection had been completed in the first period), between February and March 2010 and November 2010 to March 2011. Unforeseen requirements from the funder to review projects resulted in a suspension of data collection for a period of 7 months. Informed consent was obtained from all women to be screened for eligibility to participate in the second stage of the survey. To participate in the survey, women had to be 16 years or older, pregnant, attending their first antenatal visit at the MOU, give written consent to participate in the study, and provide a urine sample. Each participant received a chain store voucher to the value of R50 (approximately US$3.50) at the conclusion of the interview as thanks for their participation. A list of community and government resources was also provided, with contact details for organisations that provide psychological services and substance abuse treatment.

3.2.5 Data Analysis

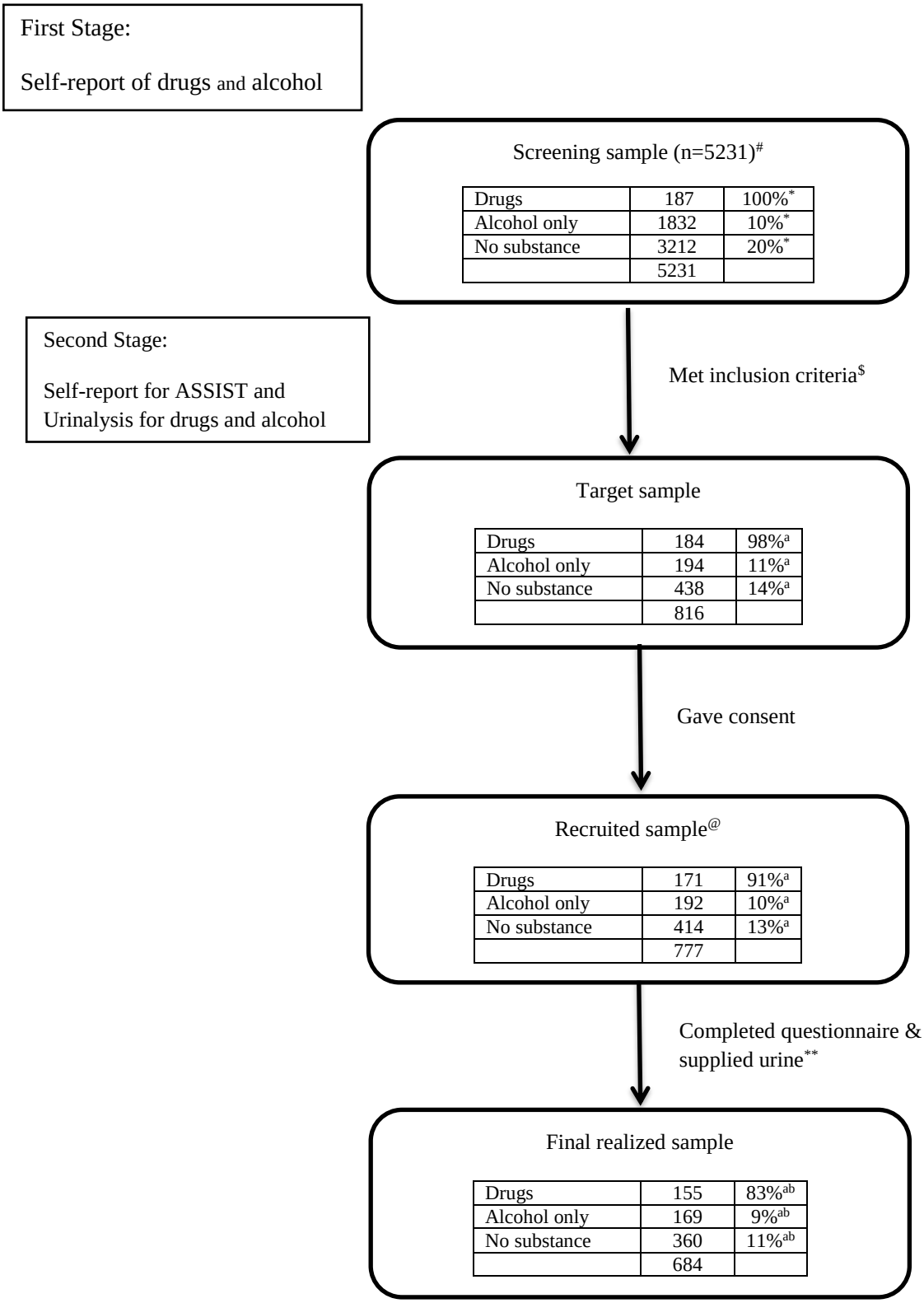
Data were analysed using SPSS version 22. Appropriate sampling weights were determined according to the study design to generalize the results to the described population of pregnant women (see Petersen Williams et al., 2014). A survey analysis was conducted, using appropriate weights for the proportional allocation of women, to estimate the prevalence of psychological distress, with 95% confidence limits applied to the sample. A finite population correction was also used. Descriptive statistics were used to represent the socio-demographic characteristics. Chi-square test of association and t-tests for independent samples were used to assess differences between younger and older study participants on demographic and other variables. A multivariate logistic regression model was run to determine the socio-demographic and obstetric risk factors for psychological distress.

3.3 Results

Of the 5231 pregnant women who were screened, 187 self-reported drug use (Stratum A), 1832 self- reported alcohol use (Stratum B), and 3212 reported no AOD use (Stratum C). 184 of the 187 drug users met the study's inclusion criteria, of which 171 agreed to participate. Every tenth participant of the 1832 alcohol users was selected, with 194 meeting the inclusion criteria,

and 192 of those agreeing to participate. Every fifth participant of the 3212 nonusers was selected, of which 438 met the inclusion criteria and 414 agreed to participate. Questionnaires were not completed by 93 participants, reducing the final sample to 684 (as illustrated in Figure 3.1). Among the reasons participants provided for not completing the questionnaire were feeling tired, hungry, running out of time, or simply no longer interested. Of these 93 women, 16 (8.7%) were in the drug group, 23 (12.0%) were in the alcohol only group, and 54 (13.0%) were in the no AOD group. Therefore, in comparison to the other two groups, fewer women from the drug group were lost to the study.

Figure 3.1 Sampling procedures (with permission, Petersen Williams et al., 2014)



Proportional selection from 11 MOU clinics from a total population of 41715
* Intentional sampling proportions from each strata, these were changed during the study
$ pregnant, first booking, 16 years or older
@ these women got an ID number
a the denominator for percentages were the strata sizes from the screening sample
b weights used in the analysis
** 93 (12%) women disappeared after recruitment for various reasons, this varies from 0% to 29% for the 11 clinics

3.3.1 Characteristics of the sample

Of the subsample of 684 participants, 20 participants had incomplete SRQ-20 questionnaires and so could not be included in the analysis. As such, 664 participants (97%) were available for the purposes of this paper and their socio-demographic characteristics are provided in Table 3.1. Ranging in age from 16 to 45 years, the average age of the sample was 25.1 years (SD = 5.72). While twenty-one (3.2%) participants had obtained a tertiary qualification, the majority of the sample reported having completed secondary education. Less than one third were employed at the time and almost a quarter of the sample met the criteria for low socio-economic status (SES) by having fewer than 5 items in their homes. Respondents primarily identified as 'Black African' and 'Coloured'[10].

Sixty-four percent of the sample were in the second trimester of their pregnancy at the time of the survey, with more than two thirds of participants' pregnancies reportedly unplanned. More than half reported having experienced complications during a previous delivery, while 41.9% were pregnant for the first time. The average number of previous pregnancies was 1.98, with women from the younger group (16-24 years) having had significantly more pregnancies than those from the older group (25 years and older). Significant differences between the age groups were also found on employment rates, highest level of education, planned pregnancies, and experience of complications during previous deliveries.

[10] While the authors recognise that this classification is deeply and historically problematic, the continued use of these markers in South Africa is important for monitoring improvements in health and socio-economic disparities that originated from such a classification system.

Table 3.1 Socio-demographic characteristics of the sample

	Total Sample	**Age 16-24**	**Age 25 +**	***p*-value**
	N=664	***n=336***	***n=328***	
Education				
Primary	32 (4.8%)	15 (4.5%)	17 (5.2%)	0.04*
Secondary	608 (92.0%)	314 (94.0%)	294 (89.9%)	
Tertiary	21 (3.2%)	5 (1.5%)	16 (4.9%)	
Employment				
Yes	202 (30.4%)	77 (22.9%)	125 (38.1%)	<0.01*
No	462 (69.6%)	259 (77.1%)	203 (61.9%)	
SES				
Low	164 (24.7%)	76 (22.6%)	88 (26.8%)	0.21
High	500 (75.3%)	260 (77.4%)	240 (73.2%)	
Race				
Black/African	350 (52.7%)	164 (48.8%)	186 (56.7%)	0.10
Coloured	303 (45.6%)	167 (49.7%)	136 (41.5%)	
White/Asian/Other Minority	11 (1.7%)	5 (1.5%)	6 (1.8%)	
Gestation				
First (0-12 weeks)	168 (26.6%	79 (25.6%)	89 (27.6%)	0.79
Second (13-28 weeks)	404 (64.0%)	202 (65.4%)	202 (62.7%)	
Third (≥29 weeks)	59 (9.4%)	28 (9.1%)	31 (9.6%)	
Pregnancy planned				
No	437 (69.4%)	233 (75.6%)	204 (63.4%)	<0.01*
Yes	193 (30.6%)	75 (24.4%)	118 (36.6%)	
Previous complications during birth				
Yes	344 (52.6%)	104 (31.4%)	240 (74.3%)	<0.01*
No	36 (5.5%)	17 (5.1%)	19 (5.9%)	
First pregnancy	274 (41.9%)	210 (63.4%)	64 (19.8%)	
Average no. of previous pregnancies m(sd)	1.98 (9.37)	2.32 (13.12)	1.63 (1.15)	<0.01*

* Significant at the 95% confidence interval ($p<0.05$)

As reflected in Table 3.2, a minority of respondents (2.2%) reported that they were not in an intimate relationship at the time. Substance use patterns among respondents' partners revealed that almost half were poly-substance users, while users of tobacco products only and alcohol only were at approximately 15% each. More than a quarter of the women who were surveyed indicated that they had or might have been physically abused in the previous three months, with significant difference found between the two age groups. Ten (1.5%) women revealed that they had or might have been raped within the last three months. Significantly more women from the older age group had partners who were employed than those from the younger age group.

Table 3.2 Characteristics of participants' interpersonal relationships

	TOTAL	**Age 16-24**	**Age 25 +**	***p*-value**
	N=664	***n=336***	***n=328***	
Partner employed				
No	165 (25.4%)	99 (29.9%)	66 (20.7 %)	0.01*
Yes	471 (72.5%)	222 (67.1%)	249 (78.1%)	
Currently single	14 (2.2%)	10 (3.0%)	4 (1.3%)	
Partner's substance use				
Non-user	152 (23.3%)	65 (19.6%)	87 (27.3%)	0.08
Tobacco products only	95 (14.6%)	51 (15.4%)	44 (13.8%)	
Alcohol only	100 (15.4%)	53 (16.0%	47 (14.7%)	
Polysubstance abuse	291 (44.7%)	153 (46.1%)	138 (43.3%)	
Single illicit substance use	13 (2.0%)	10 (3.0%)	3 (0.9%)	
Physically abused in last 3 months				
No	468 (70.5%)	243 (81.8%)	225 (61.3%)	0.01*
Yes /unsure	196 (29.5%)	54 (18.2%)	142 (38.7%)	
Forced to have sex in last 3 months				
No	653 (98.5%)	295 (99.3%)	358 (97.8%)	0.06
Yes /unsure	10 (1.5%)	2 (0.7%)	8 (2.2%)	
Social Support Scale m(sd)				
Friends score	16.71 (8.16)	16.79 (8.12)	16.63 (8.21)	0.36
Family score	22.93 (6.47)	23.04 (5.93)	22.82 (6.98)	0.67
Significant other score	24.93 (4.73)	24.95 (4.55)	24.92 (4.91)	0.33

* Significant at the 95% confidence interval ($p<0.05$)

3.3.2 Prevalence of psychological distress

Of the 664 women who completed the survey, 38.6% (*n* = 256) screened at risk for psychological distress (SRQ scores ≥8). The mean SRQ-20 score was 6.45 (SD = 4.30) out of a possible maximum score of 20. As many as 16.9% (*n* = 112) women answered 'yes' to "Has the thought of ending your life been on your mind?" The unadjusted and adjusted associations between demographic, social, relationship and obstetric variables and psychological distress are presented in Table 3.3.

Table 3.3 Risk factors associated with psychological distress

	TOTAL	Low Psychological Distress (SRQ≤7)	High Psychological Distress (SRQ≥8)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
	N=664	***n=408***	***n=256***		
Age m(sd)	25.11 (5.72)	25.25 (5.67)	24.89 (5.80)	0.99 (0.98-1.00)*	0.98 (0.96-0.99)*
Education	**N=661**	***n*=406**	***n*=255**		
Primary school	32 (4.8%)	12 (3.0%)	20 (7.8%)	1.00	1.00
High school	608 (92.0%)	380 (93.6%)	228 (89.4%)	0.32 (0.25-0.42)*	0.59 (0.44-0.80)*
Tertiary	21 (3.2%)	14 (3.4%)	7 (2.7%)	0.29 (0.19-0.43)*	0.78 (0.49-1.25)
Employment	**N=664**	***n*=408**	***n*=256**		
Yes	202 (30.4%)	129 (31.6%)	73 (28.5%)	1.00	1.00
No	462 (69.6%)	279 (68.4%)	183 (71.5%)	1.17 (1.03-1.32)*	1.04 (0.90-1.20)
SES	**N=664**	***n*=408**	***n*=256**		
High	500 (75.3%)	319 (78.2%)	181 (70.7%)	1.00	1.00
Low	164 (24.7%)	89 (21.8%)	75 (29.3%)	1.51 (1.33-1.71)*	1.45 (1.24-1.68)*
Partner support of current pregnancy	**N=651**	***n*=403**	***n*=248**		
No	37 (5.7%)	11 (2.7%)	26 (10.5%)	1.00	1.00
Yes	601 (92.3%)	385 (95.5%)	216 (87.1%)	0.23 (0.18-0.30)*	0.35 (0.26-0.46)*
No partner	13 (2.0%)	7 (1.7)%	6 (2.4%)	0.39 (0.25-0.62)*	0.32 (0.18-0.54)*
Overall Social Support Score m(sd)	64.58 (13.35)	67.70 (11.74)	59.60 (14.26)	0.95 (0.95-0.96)*	0.96 (0.95-0.96)*
Pregnancy Planned	**N=630**	***n*=377**	***n*=253**		
Yes	193 (30.6%)	122 (32.4%)	71 (28.1%)	1.00	1.00
No	437 (69.4%)	255 (67.6%)	182 (71.9%)	1.24 (1.09-1.40)*	1.02 (0.88-1.17)
Previous birth complications	**N=654**	**n=402**	***n*=252**		
First pregnancy	274 (41.9%)	180 (44.8%)	94 (37.3%)	1.00	1.00
Yes	344 (52.6%)	206 (51.2%)	138 (54.8%)	1.28 (1.14-1.44)*	1.18 (1.01-1.38)*
No	36 (5.5%)	16 (4.0%)	20 (7.9%)	2.46 (1.91-3.16)*	1.61 (1.21-2.14)*
Gestation Term	**N=631**	***n*=379**	***n*=252**		
First trimester	168 (26.6%)	96 (25.3%)	72 (28.6%)	1.00	1.00
Second trimester	404 (64.0%)	253 (68.8%)	151 (59.9%)	0.81 (0.71-0.92)*	0.86 (0.74-0.99)*
Third trimester	59 (9.4%)	30 (7.9%)	29 (11.5%)	1.32 (1.07-1.63)*	1.13 (0.88-1.45)
Physically abused AND/OR raped in last 3/12	**N=663**	***n*=408**	***n*=255**		
No to both	591 (89.1%)	383 (93.9%)	208 (81.6%)	1.00	1.00
Yes/maybe to one/both	72 (10.9%)	25 (6.1%)	47 (18.4%)	3.46 (2.89-4.15)*	1.94 (1.57-2.40)*
Tobacco Involvement m(sd)	14.68 (8.56)	13.4 (8.59)	16.22 (8.29)	0.99 (0.99-0.99)*	0.99 (0.99-1.00)
Alcohol Involvement m(sd)	10.07 (8.99)	8.92 (8.26)	11.60 (9.69)	0.99 (0.99-0.99)*	0.99 (0.99-1.00)*
Other Drug Involvement m(sd)	6.89 (8.61)	2.00 (2.45)	10.80 (10.04)	0.99 (0.98-0.99)*	0.99 (0.98-1.00)*

* Significant at the 95% confidence interval ($p<0.05$)

3.3.3 Factors associated with psychological distress

In the multivariate model, a number of factors were found to have statistically significant associations with the experience of psychological distress. Factors associated with increased risk for psychological distress included low SES (OR = 1.45, 95% CI 1.24-1.68); being the

victim of physical abuse and/or rape in the previous three months (OR = 1.94, 95% CI 1.57-2.40); having given birth (OR = 1.61, 95% CI 1.21-2.14); and, complications during a previous delivery (OR = 1.18, 95% CI 1.01-1.38), when compared to women pregnant for the first time. Protective factors included increasing age (OR = 0.98, 95% CI 0.96-0.99); having a high school education (OR = 0.59, 95% CI .44-0.80); having a partner who is supportive of the pregnancy (OR = 0.35, 95% CI 0.26-0.46); not having a partner at all compared to having an unsupportive partner (OR = 0.32, 95% CI 0.18-0.54); higher overall social support scores as measured on the MSPSS (OR = 0.96, 95% CI 0.95-0.96); being in the second semester of pregnancy compared to the first (OR = 0.86, 95% CI 0.74-0.99); and substance use, particularly alcohol (OR = 0.99, 95% CI 0.99-1.00) and other drug use (OR = 0.99, 95% CI 0.98-1.00).

3.4 Discussion

Over a third of the pregnant women served by MOUs in the Cape Metro are estimated to experience psychological distress. When all other variables were adjusted for in the model, factors associated with increased risk for psychological distress were found to include low socio-economic status, previous delivery complications, as well as having experienced physical abuse and/or rape within three month prior to the interviews. Also noteworthy is that women who had given birth before were 1.6 times more likely to be psychologically distressed than first-time mothers. When all other variables were controlled for, protective factors were found to include increasing age; a high school compared to a primary school education; a partner who is supportive of the pregnancy; as well as social support from friends, family and a significant other. Unexpectedly, while having a secondary education proved to be a protective factor, having a tertiary qualification did not significantly reduce the risk for psychological distress, compared to having a primary school education. It is possible that the failure of tertiary education to improve personal circumstances leads to in a constrained economy and unequal society is reflected in this finding. Of interest, being single significantly reduced the risk for distress over having a partner who is unsupportive of the pregnancy. Furthermore, while only minimally statistically significant, the use of alcohol and other drugs was associated with decreased risk for psychological distress. Lastly, women in the second trimester of their pregnancy were significantly less distressed than those in the first trimester.

The prevalence rate for antenatal psychological distress of almost 40% is substantially elevated compared to the systematic review finding of 15.6% for antenatal CMD symptoms in LMI contexts (Fisher et al., 2012). However, the focus of most prevalence studies has been limited

to symptoms of depression or anxiety. The more broadly defined 'psychological distress' accounts for a wider range of symptoms associated with anxiety, depressive and somatoform disorders and so may represent one explanation for the higher rate in this study. Furthermore, this result is not unusual in the South African context and falls along the median of findings from other South African studies (Hartley et al., 2011; Tomlinson et al., 2014), where prevalence rates for antenatal CMDs are generally high, and ranging between 21% (Brittain et al., 2015) and 47% (Rochat et al., 2011).

In keeping with research from both HI and LMI contexts, this study found that women living in socio-economically deprived circumstances were almost 1.5 times more likely to experience psychological distress (Fisher et al., 2012; Lancaster et al., 2010). Risk and protective factors found in this study were consistent with those found in other LMI contexts, and were not dissimilar to those found in studies of postnatal CMD symptoms. The former include, exposure to sexual and/or physical violence (Connelly, Hazen, Baker-Ericzén, Landsverk, & Horwitz, 2013; Fisher et al., 2010; Howard et al., 2013), poor partner and/or social support (Biratu & Haile, 2015; Fisher et al., 2012; Ramchandani et al., 2009; Sawyer et al., 2010; Waqas et al., 2015), and prior experience of adverse reproductive events (Fisher et al., 2010, 2012; Waqas et al., 2015). Protective factors found in this study that correlate with those in other studies included, increasing age (Clarke et al., 2014); partner and social support (Rahman, Iqbal, & Harrington, 2003; Rwakarema, Premji, Nyanza, Riziki, & Palacios-Derflingher, 2015; Waqas et al., 2015), and level of education (Tomlinson et al., 2004).

Risk factors frequently identified in other studies, such as unplanned pregnancy (Biratu & Haile, 2015; de Oliveira Brito, Alves, Ludermir, & de Araújo, 2015) and unemployment (Fisher et al., 2012) were, however, not found to significantly increase risk for psychological distress in the present study. Substance abuse has also frequently been associated with elevated symptoms of CMDs in other studies (Connelly et al., 2013; Tomlinson et al., 2014). However, this study found that those participants who used tobacco and alcohol were less likely to show symptoms of psychological distress. Perhaps, in contexts where access to mental health services is limited, substances serve to soothe psychological distress, even if in unhealthy and dysfunctional ways (Smith et al., 2017). To the best of our knowledge, no other studies have found previous pregnancies to increase risk for psychological distress or CMDs, as was highlighted in these results. Maltreatment in South African maternity wards is well-documented (Jewkes, Abrahams, & Mvo, 1998; Kruger & Schoombee, 2010). It is possible

that in underresourced contexts where staff burn-out rates are high (Klopper, Coetzee, Pretorius, & Bester, 2012) and job dissatisfaction is low (Pillay, 2009), that prior experience of giving birth in stressful settings might cause distress among mothers who must seek care there. It is also possible that that this distress is associated with the stress of having to care for another child with limited resources at the mothers' disposal.

It is important to consider that resource-constrained contexts are overlayed with complexities that might have a considerable bearing on the experience of psychological distress during pregnancy. While studies from high income countries offer significant insights into perinatal CMDs, the experience of perinatal mental illness in LMI contexts is arguably substantively different, for reasons that might include treatment inaccessibility due to underresourced and over-taxed public health systems, as well as a variety of socio-economic factors. Studies have clearly shown that socio-economic deprivation increases the risk for the development of perinatal mental illness in mothers and so this issue is of particular concern to LMI countries (Abrams & Curran, 2009; Almond, 2009; Fisher et al., 2012; Patel, Rodrigues, & DeSouza, 2002), but social inequality may well be as detrimental to health and wellbeing (Pickett & Wilkinson, 2014). If appropriate, context-specific, and effective interventions are to be designed, closer investigation of perinatal CMDs in these settings is warranted. Identifying a broader range of symptoms as well as those factors that put women at risk for antenatal mental illness (and therefore at risk for postnatal mental illness) may provide important information as to the development of appropriate and early interventions (Halbreich & Karkun, 2006) that can be integrated at primary level.

The study is limited by its cross-sectional design. Furthermore, normal physiological changes are to be expected during pregnancy and so the results from such screening procedures must be interpreted with caution. However, somatic symptoms have been found to be more common among women with depression compared to those who are not depressed (Nylen, Williamson, Hara, Watson, & Engeldinger, 2013). These symptoms are also frequently expressed among non-perinatal women from LMI contexts who are depressed or anxious (Howard et al., 2014). Furthermore, the use of a more comprehensive assessment measure such as the Composite International Diagnostic Interview (CIDI) (Kessler et al., 2004) might have yielded different results to the screening instrument used in this study, which relies on self-report. Data pertaining to histories of mental illness were not collected, ruling out the possibility of examining their impact as a factor. Finally, the results from this study are limited to one

province and not necessarily generalizable to other parts of the country. Future investigations might consider using a non-perinatal control group, as well as screening data from a group of middle-to-high-income perinatal women. This might provide valuable information about the ways in which limited access to mental health care might influence the substantive experience of perinatal mental distress.

This chapter investigated the prevalence of antenatal psychological distress, along with the associated risk factors. The next chapter explores the perceptions that pregnant women have of psychiatric symptoms during the perinatal period, as well as their conceptions of possible causes, and their views of the most appropriate treatments.

CHAPTER 4

MENTAL HEALTH LITERACY AMONG PREGNANT WOMEN IN THE WESTERN CAPE

4.1 Background

The previous chapter examined the prevalence and predictors of psychological distress among pregnant women in the Western Cape. This chapter is concerned with answering the second research question presented in Chapter 1, by investigating the mental health literacy of pregnant women receiving antenatal care at one MOU, including their perceptions of the causes of CMDs and their appropriate treatments. A review of the literature was presented in Chapter 2. The following represents a summary of that review.

It has been estimated that fewer than one in six pregnant women in HI countries who screen positive for depressive symptoms receive any treatment (Fonseca et al., 2015; Marcus, Flynn, Blow, & Barry, 2003). No such perinatal data is available in South Africa as yet, however results from the SASH study indicated that only about a quarter of people with mental illnesses received any treatment within a twelve-month period (Williams et al., 2008). A low perceived need for treatment (93%) was found to be the single most influential factor for not seeking treatment among South Africans, along with the belief that symptoms would spontaneously resolve (Bruwer et al., 2011). These findings suggest conceptualisations of mental illness that might prevent help-seeking, especially from professionals.

In addition to being able to recognise mental illnesses, the construct of mental health literacy (MHL) includes knowledge of risk factors, causes, treatments, and effective professional services (Jorm et al., 1997). Research suggests that poor MHL serves as a barrier to appropriate help-seeking, as well as contributing to patients' failure to adhere to recommended treatments once a diagnosis is received (Bruwer et al., 2011; Jorm et al., 2006; Trump & Hugo, 2006). To date, most research has focused on depression and schizophrenia, with almost no attention given to other disorders, including CMDs such as anxiety or substance use disorders (Furnham & Hamid, 2014; Hugo et al., 2003; Mbanga et al., 2002; Schomerus et al., 2012; Sorsdahl et al., 2010; Sorsdahl & Stein, 2010). Data from LMI countries are even less readily available (Atilola, 2015; Furnham & Hamid, 2014; Jorm, 2012). Atilola's (2015) systematic review of levels of community MHL in sub-Saharan Africa found that the limited amount of available

data, also primarily concerned with mood and psychotic symptoms, reflected poor knowledge of orthodox labels for psychiatric syndromes. Supernatural explanations for symptoms were predominant, with alternative mental health services identified as the preferred treatment option (Atilola, 2015).

Internationally, research investigating the MHL of women in the perinatal period is limited and primarily focused on depression. A small body of data has been gathered from high income countries, showing that women in the perinatal period often fail to recognise depression in themselves (Dennis & Chung-Lee, 2006; Fonseca et al., 2015), while the signs and symptoms frequently also go undetected by their healthcare providers (Goodman & Tyer-Viola, 2010). Research has shown that pregnant women often have difficulty differentiating between the experience of being pregnant and the symptoms associated with depression, more so than in the postnatal period (Henshaw et al., 2013; Highet et al., 2011; Hübner-Liebermann et al., 2012). Difficulties distinguishing between the emotional adjustments to pregnancy or parenthood and depression have been found to be a barrier to help-seeking (Bilszta et al., 2010; Fonseca et al., 2015; Goodman, 2009). One study found that women who are pregnant and screen positive for depression have the most confidence in psychotherapy and support from friends and family, and the least in medications and case management as treatment options (O'Mahen & Flynn, 2008).

MHL research with perinatal women in LMI countries, including South Africa, is absent. The aim of this study was to investigate the MHL of South African women who are pregnant and receive antenatal care at a primary health care facility in one peri-urban community in the Western Cape province of South Africa. The study sought to understand more about women's perceptions of perinatal mental illness, particularly beliefs about causes of mental illness, and views on the most effective treatments.

4.2 Methods

4.2.1 Study setting and population

Data were collected at a Midwife and Obstetrics Unit (MOU) that serves a large district in the Western Cape province of South Africa, with a primarily low-income population of approximately 500 000 people (Peton, 2012). According to a report published by the Department of Local and Provincial Government (2011), the district has a population density

of 3618 people per km^2, where more than one fifth of households live in informal housing and almost half live in poverty. Just more than 60% of the population are under the age of 29 years and 48% of employable adults are unemployed (Department of Local and Provincial Government, 2011). This MOU was selected as the site for this study as it was the same site at which the intervention study (described in Chapters 5 and 6) was conducted.

4.2.2 Participants

A convenience sample of 262 pregnant women attending antenatal appointments at the MOU were recruited to participate in the study. Due to limited resources and time constraints, as so as to gather the largest sample possible, convenience sampling was deemed the most appropriate sampling method. Women had to be pregnant, registered for perinatal care at the MOU, and at least 18 years of age in order to qualify for inclusion in the study.

4.2.3 Study procedure

Over a period of three weeks in 2014, a member of the research team made announcements to the women in the waiting area of the MOU, explaining the purpose, nature, requirements, inclusion criteria, and voluntary nature of the study. Women were then asked to indicate their interest in participating. In a private area, after providing written informed consent, each participant was randomly presented with one of five possible vignettes portraying a fictitious woman who had signs and symptoms fulfilling the DSM 5 criteria for a mental disorder. These included antenatal depression (n = 51), postnatal depression (n = 48), panic disorder (n = 53), alcohol dependence (n = 51), and schizophrenia (n = 56). Thereafter, participants were asked to complete the study questionnaire, which included two scales that were adapted for this population. Both the vignette and the measures were read aloud by the research assistants while the participants read along, if they were able to. The materials were available in English, Afrikaans or Xhosa, with research assistants fluent in all three languages.

4.2.4 Measures

In addition to a number of socio-demographic variables, the following measures were included in the survey (see Appendix II):

Socio-economic Status

Participants were asked whether or not they had electricity, as well as certain household items such as a radio, television, telephone, fridge, computer, washing machine, and cell phone. Those who had four or less of these items were grouped into a low socio-economic status (SES) group and those who had five or more were grouped into a high SES group (Morojele et al., 2010).

Mental health literacy

Measures adapted by Sorsdahl and Stein (2010) from a study by Hugo et al. (2003) were further modified to address the experiences of this study's target population, namely pregnant women. The five vignettes were adapted to portray the experiences of a fictitious woman during the perinatal period who shows signs and symptoms of a psychiatric disorder as defined by DSM-5 criteria (see Appendix II). These include disorders characterized by depression (antenatal and postnatal), anxiety (panic disorder), substance dependence (alcohol), and psychosis (schizophrenia). Studies have shown that CMDs such as anxiety, depression and substance abuse are not always perceived to be mental illness, and as such, the preferred treatment is more frequently psychosocial than pharmacological (Hugo et al., 2003). Schizophrenia was included because it is a less common mental illness with symptomology that is less likely to be attributed to psychosocial stressors by South Africans, and for which pharmacological interventions are often preferred (Mbanga et al, 2002). The inclusion of the schizophrenia vignette provided a useful mechanism by which comparisons in participants' responses could be considered.

After the vignette had been presented, participants were asked to provide a diagnosis or label that best describes the behaviours portrayed in the vignette, so as to give participants the opportunity to apply local terms for mental illnesses. They were also asked about their perceptions of aetiology and appropriate treatment in each case, after which they completed two scales. The first was a five-point mental health literacy rating scale with items addressing general views of the symptoms and testing participants' abilities to identify pathological behaviours. This was followed by a three-point rating scale asking participants to respond to a series of questions concerning aetiology (25 items) and treatment (23 items) of symptoms.

4.2.5 Data analysis

Data was analysed using the Statistics Package for the Social Sciences (version 23.0). Differences across vignettes in responses to aetiology and treatment were analysed using chi-square calculations. Comparisons were drawn between antenatal depression, alcohol dependence, schizophrenia, and panic disorder (Tables 4.3 and 4.5). The diagnoses or labels provided by participants were coded according to categories that were determined by reviewing the data that emerged. Given that this qualitative data was limited to single terms, simple coding was made possible (see Table 4.2)

4.3 Results

4.3.1 Participant socio-demographic characteristics

The socio-demographic characteristics of the sample are described in Table 4.1. The average age of the sample of 262 women who completed the study was 27.2 years (SD = 5.69), with the majority of participants having obtained a high school education (89.7%). More than half of the sample (55.7%) were unemployed at the time (55.7%).

Table 4.1 Socio-demographic characteristics of the sample

	Total Sample (N=262)	**18-25 years (n=107)**	**26 years + (n=155)**	***p*-Value**
Education				
Primary	6 (2.3%)	2 (1.9%)	4 (2.6%)	0.51
Secondary	235 (89.7%)	94 (87.9%)	141 (91.0%)	
Tertiary	21 (8.0%)	11 (10.3%)	10 (6.5%)	
Relationship status				
Partnered	117 (44.7%)	31 (29.0%)	86 (55.5%)	<0.01
Single	145 (55.3%)	76 (71.0%)	69 (44.5%)	
Expecting first child				
Yes	80 (30.5%)	63 (58.9%)	17 (11.0%)	<0.01
No	182 (69.5%)	44 (41.1%)	138 (89.0%)	
Home language				
English	95 (36.3%)	41 (38.3%)	54 (34.8%)	0.92
Xhosa	101 (38.5%)	40 (37.4%)	61 (39.4%)	
Afrikaans	49 (18.7%)	20 (18.7%)	29 (18.7%)	
Other	17 (6.5%)	6 (5.6%)	11 (7.1%)	

Employed				
Yes	116 (44.3%)	34 (31.8%)	82 (52.9%)	<0.01
No	146 (55.7%)	73 (68.2%)	73 (47.1%)	
Socio-Economic Status				
Low	31 (11.8%)	9 (8.4%)	22 (14.2%)	0.15
High	231 (88.2%)	98 (91.6%)	133 (85.8%)	
Religion				
Muslim	50 (19.1%)	21 (19.6%)	29 (18.7%)	0.35
Christian	209 (79.8%)	86 (80.4%)	123 (79.4%)	
Other	3 (1.1%)	0 (0%)	3 (1.9%)	

4.3.2 Descriptive labels or diagnoses

Participants' self-identified labels or diagnoses are represented in Table 4.2, where responses were categorised according to eight of the most common themes that emerged in the review of the data for all five vignettes. These categories included: accurate diagnosis, stress, depression (inaccurate), medical problem, unable to diagnose, pregnancy-related problem, vague, and no problem. In the accurate diagnosis category, a quarter of all participants provided a label that was consistent with the psychiatric model of mental illness. The highest percentage of participants to provide an accurate label were those who received the antenatal depression vignette (29.4%), closely followed by alcohol dependence (27.9%), and then postnatal depression (23.5%).

Across disorders, 16.4% of all participants diagnosed the symptoms as "stress". The highest number of participants to ascribe this label were those in the antenatal depression group (44.2%). The majority of participants who applied an inaccurate diagnosis of depression were those from the alcohol dependence group (53.3%). While medical problems (such as diabetes, epilepsy, and high blood pressure) accounted for 10.3% of the diagnoses provided across all vignettes, more than two thirds (70.4%) of those participants were from the group who received the panic disorder vignette. Furthermore, whereas 18.5% who received the *postnatal* depression vignette provided a medical diagnosis, not one participant from the *antenatal* depression group proffered any labels associated with medical problems.

One in five participants across the vignette groups indicated that they did not know what diagnosis to give. Of all participant responses, 16.0% were vague or broad and included labels such as "heart-broken", "disappointed", "rejected", "mad", "losing her mind", or "wild

imagination". The highest number of such responses came from the group who received the schizophrenia vignette (35.7%), followed by those from the postnatal depression (26.2%) and antenatal depression (19.0%) groups. A very small percentage of participants (3.4%) provided pregnancy-related diagnoses (such as morning sickness, or pregnancy hormones) or indicated that there was no problem to diagnose (2.7%).

Table 4.2 Thematic categories for diagnoses/labels provided by participants

	Antenatal Depression ***(n=54)*** **n (%)**	**Alcohol dependence** ***(n=51)*** **n (%)**	**Schizophrenia** ***(n=56)*** **n (%)**	**Panic Disorder** ***(n=53)*** **n (%)**	**Postnatal Depression** ***(n=48)*** **n (%)**	**Total** ***(N=262)*** **n (%)**
Accurate diagnosis	20 (29.4%)	19 (27.9%)	5 (7.4%)	8 (11.8%)	16 (23.5%)	68 (26.0%)
Stress	19 (44.2%)	10 (23.3%)	7 (16.3%)	2 (4.7%)	5 (11.6%)	43 (16.4%)
Depression (inaccurate)	N/A	8 (53.3%)	4 (26.7%)	3 (20.0%)	N/A	15 (5.7%)
Medical problem	0 (0.0%)	0 (0.0%)	3 (11.1%)	19 (70.4%)	5 (18.5%)	27 (10.3%)
Cannot provide diagnosis (don't know)	5 (9.8%)	10 (19.6%)	16 (31.4%)	11 (21.6%)	9 (17.6%)	51 (19.5%)
Pregnancy-related problem	0 (0.0%)	0 (0.0%)	3 (33.3%)	4 (44.4%)	2 (22.2%)	9 (3.4%)
Vague/broad	8 (19.0%)	3 (7.1%)	15 (35.7%)	5 (11.9%)	11 (26.2%)	42 (16.0%)
No problem	2 (28.6%)	1 (14.3%)	3 (42.9%)	1 (14.3%)	0 (0.0%)	7 (2.7%)

4.3.3 View of symptoms

Responses from participants who received the vignettes depicting antenatal depression, alcohol dependence, schizophrenia and panic disorder are found in Table 4.3, where significant differences between the groups on four of the five views were found. More than a third of participants (35.3%) considered the symptoms of these disorders to represent a "normal response". Alcohol dependence (17.6%) was the vignette most commonly recognized as a disorder, while antenatal depression (51.9%) was the vignette least commonly recognized as a disorder (X^2 = 14.07, df = 3, p < 0.01). Similarly, when asked to consider the symptoms as "normal for pregnancy or motherhood", significant differences between the groups were found (X^2 = 33.59, df = 3, p < 0.01). The alcohol dependence vignette group had the lowest percentage of participants (7.8%) who thought that this was likely. Despite significant differences between the vignette groups (X^2 = 9.20, df = 3, p = 0.03), collectively, more than half (57.5%) of the participants expressed the belief that the symptoms of these disorders were "typical of a weak character". However, again, the highest number of respondents to hold this view were those

who received the alcohol dependence vignette. While a quarter of all respondents (25.3%) who received these four vignettes thought the symptoms could be due to a general medical condition (GMC) (X^2 = 26.86, *df* = 3, $p < 0.01$), the group who received the panic disorder vignette had the most number of participants (50.9%) who thought that a GMC might explain the symptoms of this disorder.

A comparison between perspectives on symptoms of antenatal depression and postnatal depression are described in Table 4.3. Across both groups, and similar to the results described above, less than one third (27.8%) correctly identified the signs and symptoms described in both vignettes as portraying symptoms typical of major depressive disorder. A significant difference between the two groups was found on only one of the five views, where antenatal depression was perceived by more respondents to be a "normal response" compared to depression that occurs postnatally (X^2 = 7.69, $p < 0.01$). However, while half (50%) saw the symptoms described in both vignettes as representing a "normal response to pregnancy" or the experience of "new motherhood", more than half (57.9%) also considered the symptoms to be "typical of a weak character".

4.3.4 Perceived symptom aetiology

Among the participants who received the vignettes depicting antenatal depression, alcohol dependence, schizophrenia and panic disorder (see Table 4.3), stress was the most widely held explanation for symptoms (94.0%). Intrapsychic factors were those most commonly identified as causing symptoms across all four disorders (81.9%), of which the most widely held explanations within this group of factors were thinking too much (92.5%); expecting too much of herself (84.6%); a lack of willpower (82%); and, unconscious conflict (81.3%). More than 85% of all participants considered a lack of support to be a credible explanation for symptoms. Factors associated with pregnancy or motherhood (79.0%) were also highly rated as plausible explanations for symptoms, including being pregnant or being a mother (78.8%) and an unplanned pregnancy (79.2%). On the whole, symptoms were less commonly attributed to biological factors (55.7%) such as brain disease (38.2%) and heredity or genetic factors (53.2%), however, three quarters of the sample thought constitutional weakness might explain symptoms. The will of God (38.0%), bad luck (34.5%), and witchcraft or possession by evil spirits (32.6%) were the three causes least commonly ascribed to symptoms.

Significant differences between responses to each vignette were seen on 17 of the 25 possible causes presented, with alcohol dependence most frequently affected. This disorder was most frequently attributed to being the victim of violence (X^2 = 9.55, *df* = 3, *p* = 0.02); constitutional weakness (X^2 = 9.78, *df* = 3, *p* = 0.02); a wrong or bad attitude (X^2 = 9.33, *df* = 3, *p* = 0.03); growing up in a broken home (X^2 = 11.76, *df* = 3, *p* = 0.01); lack of parental affection (X^2 = 17.10, *df* = 3, *p* < 0.01); and, loss of traditional values in society (X^2 = 15.02, *df* = 3, *p* < 0.01). Across the four disorders (X^2 = 24.74, *df* = 3, *p* < 0.01), the highest number of respondents to ascribe symptoms to a lack of willpower were those who received the vignette describing alcohol dependence (98.0%). The will of God (X^2 = 14.98, *df* = 3, *p* < 0.01) and being pregnant or being a mother (X^2 = 11.05, *df* = 3, *p* = 0.01) were the two causes that were least commonly attributed to alcohol dependence. Schizophrenia was significantly more often seen as being caused by brain disease (X^2 = 19.10, *df* = 3, *p* < 0.01) and witchcraft or possession by evil spirits (X^2 = 14.08, *df* = 3, *p* < 0.01), and least commonly attributed to an unplanned pregnancy (X^2 = 9.45, *df* = 3, *p* = 0.02), or the hypothetical character expecting too much of herself (X^2 = 8.19, *df* = 3, *p* = 0.04). Significantly fewer participants ascribed witchcraft or possession by evil spirits to the symptoms of antenatal depression (X^2 = 14.08, *df* = 3, *p* < 0.01), along with work difficulties (X^2 = 19.14, *df* = 3, *p* < 0.01) and overprotective parents (X^2 = 9.18, *df* = 3, *p* = 0.02). Panic disorder was significantly less frequently accounted for by problems in personal or family relationships (X^2 = 17.10, *df* = 3, *p* < 0.01); a lack of support (X^2 = 11.43, *df* = 3, *p* = 0.01); or a wrong or bad attitude (X^2 = 9.33, *df* = 3, *p* = 0.03), compared to the other disorders.

TABLE 4.3 Perspectives on the symptoms of antenatal depression, alcohol dependence, schizophrenia and panic disorder, and perception of their causes

	Antenatal Depression ***(n=54)*** **% Yes (*n*)**	**Alcohol dependence** ***(n=51)*** **% Yes (*n*)**	**Schizophrenia** ***(n=56)*** **% Yes (*n*)**	**Panic Disorder** ***(n=53)*** **% Yes (*n*)**	**p-value**
SYMPTOMS VIEWED AS:					
A normal response	51.9 (28)	17.6 (9)	32.1 (18)	39.6 (21)	<0.01*
A normal response for pregnancy / new motherhood	57.4 (31)	7.8 (4)	39.3 (22)	43.4 (23)	<0.01*
Typical of weak character	57.4 (31)	74.5 (38)	50.0 (28)	48.1 (25)	0.03*
Typical of mental illness	22.2 (12)	35.3 (18)	42.9 (24)	22.6 (12)	0.05
Due to GMC	11.1 (6)	15.7 (8)	23.2 (13)	50.9 (27)	<0.01*
CAUSES OF SYMPTOMS:					
Psychosocial stress					
Problems in personal/family relationships	94.4 (51)	94.1 (48)	82.1 (46)	69.8 (37)	<0.01*
Work difficulties	22.2 (12)	58.8 (30)	38.2 (21)	56.6 (30)	<0.01*

Stress	96.3 (52)	96.1 (49)	91.1 (51)	92.5 (49)	0.58
Being victim of violence	72.2 (39)	82.4 (42)	58.9 (33)	58.5 (31)	0.02*
Lack of support	92.6 (50)	90.2 (46)	87.5 (49)	71.7 (38)	0.01*
Poverty	50.0 (27)	64.7 (33)	50.0 (28)	57.7 (30)	0.36
Biological factors					
Brain disease	20.8 (11)	35.3 (18)	60.7 (34)	35.8 (19)	<0.01*
Heredity / genetic factors	40.7 (22)	52.9 (27)	62.5 (35)	56.6 (30)	0.16
Constitutional weakness	73.1 (38)	90.2 (46)	75.0 (42)	64.2 (34)	0.02*
Intrapsychic factors					
Lack of willpower	90.7 (49)	98.0 (50)	75.0 (42)	64.2 (34)	<0.01*
Expecting too much of herself	90.7 (49)	88.2 (45)	72.7 (40)	86.8 (46)	0.04*
Unconscious conflict	83.3 (45)	84.3 (43)	78.2 (43)	79.2 (42)	0.81
Wrong/bad attitude	70.4 (38)	82.4 (42)	67.9 (38)	54.7 (29)	0.03*
Thinking too much	94.4 (51)	86.3 (44)	92.9 (52)	96.2 (51)	0.24
Socialisation					
Growing up in broken home	66.7 (36)	90.2 (46)	62.5 (35)	69.8 (37)	0.01*
Lack of parental affection	79.6 (43)	94.1 (48)	75.0 (42)	60.4 (32)	<0.01*
Overprotective parents	42.6 (23)	68.6 (35)	66.1 (37)	56.6 (30)	0.03*
Factors related to society					
Loss of traditional values in society	57.4 (31)	82.4 (42)	73.2 (41)	50.0 (26)	<0.01*
Modern lifestyle	70.4 (38)	78.4 (40)	61.8 (34)	57.7 (30)	0.11
Exploitation of people in industrial society	44.4 (24)	54.9 (28)	55.4 (31)	41.5 (22)	0.35
Supernatural powers					
Will of God	44.4 (24)	15.7 (8)	42.9 (24)	49.1 (26)	<0.01*
Witchcraft, possession	16.7 (9)	33.3 (17)	50.0 (28)	30.2 (16)	<0.01*
Bad luck	38.9 (21)	35.3 (18)	41.1 (23)	22.6 (12)	0.18
Pregnancy					
Being pregnant/mother	88.9 (48)	66.7 (34)	72.7 (40)	86.8 (46)	0.01*
Unplanned pregnancy	87.0 (47)	86.3 (44)	66.1 (37)	77.4 (41)	0.02*

* Significant at the 95% confidence interval

In comparing responses to the ante- and postnatal depression vignettes (as seen in Table 4.4), factors associated with pregnancy and motherhood were most frequently identified as causing symptoms in both instances (91.9%). Significant differences in the attribution of causes between ante- and postnatal depression were found on five of the 25 listed possibilities. Despite the fact that all five were among the 10 least frequently ascribed explanations, in all cases, postnatal depression was significantly more frequently considered to have been caused by work difficulties ($X^2 = 17.02$, $df = 1$, $p<0.001$); brain disease ($X^2 = 8.32$, $df = 1$, $p = 0.004$); heredity

or genetic factors (X^2 = 3.94, *df* = 1, *p* = 0.047); overprotective parents (X^2 = 5.93, *df* = 1, *p* = 0.015); and witchcraft or possession by evil spirits (X^2 = 4.70, *df* = 1, *p* = 0.030).

Table 4.4 Perspectives on the symptoms of ante- and postnatal depression and perception of their causes

	Antenatal Depression *(n=54)*	**Postnatal depression *(n=48)***	***p*-value**
	% Yes (*n*)	**% Yes (*n*)**	
SYMPTOMS VIEWED AS:			
A normal response	51.9 (28)	25.0 (12)	<0.01*
A normal response for pregnancy / new motherhood	57.4 (31)	42.6 (20)	0.14
Typical of weak character	57.4 (31)	58.3 (28)	0.93
Typical of mental illness	22.2 (12)	33.3 (16)	0.21
Due to GMC	11.1 (6)	22.9 (11)	0.11
CAUSES OF SYMPTOMS:			
Psychosocial stress			
Problems in personal/family relationships	94.4 (51)	91.7 (44)	0.58
Work difficulties	22.2 (12)	62.5 (30)	<0.01*
Stress	96.3 (52)	93.8 (45)	0.55
Being victim of violence	72.2 (39)	68.8 (33)	0.70
Lack of support	92.6 (50)	89.6 (43)	0.59
Poverty	50.0 (27)	56.3 (27)	0.53
Biological factors			
Brain disease	20.8 (11)	47.9 (23)	<0.01*
Heredity / genetic factors	40.7 (22)	60.4 (29)	0.05*
Constitutional weakness	73.6 (39)	83.0 (39)	0.26
Intrapsychic factors			
Lack of willpower	90.7 (49)	77.1 (37)	0.06
Expecting too much of herself	90.7 (49)	91.7 (44)	0.87
Unconscious conflict	83.3 (45)	87.5 (42)	0.55
Wrong/bad attitude	70.4 (38)	77.1 (37)	0.44
Thinking too much	94.4 (51)	93.8 (45)	0.88
Socialisation			
Growing up in broken home	66.7 (36)	77.1 (37)	0.24
Lack of parental affection	79.6 (43)	87.5 (42)	0.29
Overprotective parents	42.6 (23)	66.7 (32)	0.02*
Factors related to society			
Loss of traditional values in society	57.4 (31)	68.8 (33)	0.24
Modern lifestyle	70.4 (38)	60.4 (29)	0.29
Exploitation of people in industrial society	44.4 (24)	56.3 (27)	0.23

Supernatural powers			
Will of God	44.4 (24)	44.7 (21)	0.98
Witchcraft, possession	16.7 (9)	35.4 (17)	0.03*
Bad luck	38.9 (21)	35.4 (17)	0.72
Pregnancy			
Being pregnant/mother	88.9 (48)	95.8 (46)	0.19
Unplanned pregnancy	87.0 (47)	95.8 (46)	0.12

* Significant at the 95% confidence interval

4.3.5 Perceptions of treatment

Participants' views of the most beneficial treatments for the character in the vignettes describing antenatal depression, alcohol dependence, schizophrenia and panic disorder are detailed in Table 4.5. On the whole, participants appeared to have the most confidence in psychological services (78.0%) to provide effective treatment to alleviate the symptoms described in the vignettes, followed by lifestyle and self-help options (75.8%), spiritual or traditional guidance (51.4%), and finally, medical interventions and treatments (21.8%). The majority of participants felt that consulting with a mental health professional such as a counsellor (97.8%), social worker (94.5%), psychologist (89.0%) or psychiatrist (86.0%) would be beneficial to the character in the vignette. In keeping with this, psychotherapy was also highly advocated by participants (94.8%). Most participants (90.7%) felt that getting out more and participating in more physical activities (87.5%) would serve to alleviate the symptoms of all four disorders. Talking to close family (89.3%) and friends (80.7%), or obtaining guidance from a spiritual or religious (89.3%) were also considered to be viable sources of help. More than two thirds of all participants endorsed vitamins (67.6%) as a promising treatment option. Almost one in five felt that antibiotics (18.7%) and pain relievers (18.2%) would help, and yet only slightly more than one third thought that antidepressants (38.3%) and treatment in a psychiatric ward (35.5%) would be beneficial. ECT was the least endorsed of all the treatment options listed (8.0%). These findings were echoed in the comparison between the treatments endorsed for ante- and postnatal depression (as seen in Table 4.6).

Table 4.5 Perceptions of the most helpful treatment options for antenatal depression, alcohol dependence, schizophrenia and panic disorder.

	Antenatal Depression ***(n=54)***	**Alcohol dependence** ***(n=51)***	**Schizophrenia** ***(n=56)***	**Panic Disorder** ***(n=53)***	***p*-value**
	% Rx Helpful (*n*)	**% Rx Helpful (*n*)**	**% Rx Helpful (*n*)**	**% Rx Helpful (*n*)**	
Psychological					
Counsellor	98.1 (53)	100.0 (51)	92.9 (52)	100.0	0.04*
Social worker	96.3 (52)	98.0 (50)	87.5 (49)	96.2 (51)	0.07
Telephone counselling	59.3 (32)	49.0 (25)	50.0 (28)	54.7 (29)	0.70
Psychiatrist	87.0 (47)	90.2 (46)	87.5 (49)	79.2 (42)	0.41
Psychologist	88.9 (48)	98.0 (50)	78.6 (44)	90.6 (48)	0.02*
Psychotherapy	94.4 (51)	100.0 (50)	96.4 (54)	88.5 (46)	0.06
Hypnosis	16.7 (9)	38.8 (19)	35.7 (20)	32.1 (17)	0.07
Lifestyle and self-help					
Close family	98.1 (53)	88.2 (45)	80.4 (45)	90.6 (48)	0.03*
Close friends	90.6 (48)	78.4 (40)	73.2 (41)	77.4 (41)	0.13
Naturopath	27.8 (15)	41.2 (21)	50.0 (28)	35.8 (19)	0.11
Vitamins	77.4 (41)	58.8 (30)	64.3 (36)	69.8 (37)	0.21
Physical activity	92.6 (50)	96.1 (49)	83.9 (47)	77.4 (41)	0.02*
Get out more	96.2 (51)	94.1 (48)	85.7 (48)	86.8 (46)	0.16
Medical					
Pain relievers	22.2 (12)	15.7 (8)	16.1 (9)	18.9 (10)	0.80
Antidepressants	44.4 (24)	41.2 (21)	37.5 (21)	30.2 (16)	0.47
Antibiotics	13.0 (7)	15.7 (8)	21.4 (12)	24.5 (13)	0.40
Sleeping pills	13.0 (7)	5.9 (3)	14.3 (8)	17.0 (9)	0.37
Antipsychotics	11.1 (6)	19.6 (10)	35.7 (20)	20.8 (11)	0.02*
Tranquilisers	20.4 (11)	19.6 (10)	17.9 (10)	28.3 (15)	0.56
Psychiatric ward	22.2 (12)	49.0 (25)	46.4 (26)	24.5 (13)	<0.01*
ECT	3.7 (2)	13.7 (7)	8.9 (5)	5.7 (3)	0.25
Spiritual / Traditional					
Traditional healer	18.5 (10)	13.7 (7)	10.7 (6)	11.3 (6)	0.63
Spiritual / religious advisor	96.3 (52)	86.3 (44)	83.9 (47)	90.6 (48)	0.17

* Significant at the 95% confidence interval

Significant differences in the perceived effectiveness of treatments or interventions between the various disorders were seen on six of the 23 possibilities. All of these differences involved the treatment of schizophrenia, with significantly less frequent endorsements for consulting a counsellor (X^2 = 8.21, *df* = 3, *p* = 0.04) or a psychologist (X^2 = 10.42, *df* = 3, *p* = 0.02); or talking to close family (X^2 = 9.22, *df* = 3, *p* = 0.03). Increased physical activity was not as widely supported in the treatment of schizophrenia or panic disorder compared to depression

and alcohol dependence (X^2 = 10.26, *df* = 3, *p* = 0.02). However, antipsychotics were more frequently recommended for schizophrenia than for the other disorders (X^2 = 10.10, *df* = 3, *p* = 0.02). Also, treatment at a psychiatric facility was more frequently recommended in the treatment of schizophrenia and alcohol dependence (X^2 = 13.934, *df* = 3, *p* < 0.01). There were no significant differences between the treatments recommended for antenatal depression and those for postnatal depression.

Table 4.6 Perceptions of the most helpful treatment options for ante- and postnatal depression

	Antenatal Depression *(n=54)*	**Postnatal depression *(n=48)***	**p-value**
	% Rx Helpful (*n*)	**% Rx Helpful (*n*)**	
Psychological			
Counsellor	98.1 (53)	93.8 (45)	0.25
Social worker	96.3 (52)	97.9 (47)	0.63
Telephone counselling	59.3 (32)	50.0 (24)	0.35
Psychiatrist	87.0 (47)	85.4 (41)	0.81
Psychologist	88.9 (48)	91.7 (44)	0.64
Psychotherapy	94.4 (51)	97.9 (47)	0.37
Hypnosis	16.7 (9)	27.1 (13)	0.20
Lifestyle and self-help			
Close family	98.1 (53)	91.7 (44)	0.13
Close friends	90.6 (48)	81.3 (39)	0.18
Naturopath	27.8 (15)	33.3 (16)	0.54
Vitamins	77.4 (41)	62.5 (30)	0.10
Physical activity	92.6 (50)	87.5 (42)	0.39
Get out more	96.2 (51)	95.8 (46)	0.92
Medical			
Pain relievers	22.2 (12)	18.8 (9)	0.67
Antidepressants	44.4 (24)	45.8 (22)	0.89
Antibiotics	13.0 (7)	14.6 (7)	0.81
Sleeping pills	13.0 (7)	6.4 (3)	0.27
Antipsychotics	11.1 (6)	14.6 (7)	0.60
Tranquilisers	20.4 (11)	19.1 (9)	0.88
Psychiatric ward	22.2 (12)	31.9 (15)	0.27
ECT	3.7 (2)	10.4 (5)	0.18
Spiritual / Traditional			
Traditional healer	18.5 (10)	20.8 (10)	0.77
Spiritual / religious advisor	96.3 (52)	91.7 (44)	0.32

* Significant at the 95% confidence interval

4.4 Discussion

This study has several instructive findings. First, one quarter (26.0%) of participants provided a label or diagnosis that was in keeping with medical model terms for the disorder with which they were presented. This was echoed in responses to the questionnaires, where more than three quarters of respondents (77.4%) did not identify the signs and symptoms described in the vignettes as characteristic of mental illness. Similarly, from the ante- and postnatal depression groups, 70% of participants did not associate the symptoms with the orthodox psychiatric definition of major depressive disorder. While the symptoms of antenatal depression were most frequently seen as reflecting a "normal response", alcohol dependence was least commonly seen in this light. More than half of all participants (57.5%) were of the view that all the disorders depicted were "typical of a weak character". This view has potentially significant implications for help-seeking, where self-stigma associated with the notion of symptoms as indicative of character weakness might prevent women from seeking help.

Second, stress was the most widely held explanation for symptoms of all disorders, as well as one of the diagnoses most commonly applied across all five vignettes (16.4%). Along with factors related to pregnancy and motherhood, symptoms were also attributed to overthinking, expecting too much of oneself, a lack of willpower, unconscious conflict, relationship difficulties, and a lack of support. In comparing ante- and postnatal depression, the latter was significantly more commonly thought to be caused by work difficulties, brain disease, heredity or genetic factors, overprotective parents, and witchcraft or possession by evil spirits. Responses to the causes of alcohol dependence more frequently deviated from those ascribed to other disorders and included a lack of will-power, constitutional weakness, a wrong or bad attitude, growing up in a broken home, lack of parental affection, being the victim of violence, and a loss of traditional values in society. Schizophrenia was more often seen as caused by brain disease and witchcraft or possession by evil spirits.

Third, participants showed the most confidence in the therapeutic potential of psychological services, especially consulting with a counsellor or social worker. These were closely followed by lifestyle and self-help options as the most endorsed means to addressing psychiatric symptoms during pregnancy. Medical interventions, including psychotropic medications were among the least frequently supported treatment options. However, differences concerning perceived effectiveness of treatments were all related to schizophrenia. In this regard, there was less confidence in the benefits of consulting a counsellor or psychologist, or in talking to close

family. Physical activity was also not highly regarded in the treatment of schizophrenia, nor for panic disorder. Antipsychotics were more frequently endorsed for treating schizophrenia than for any other disorder. Treatment at a psychiatric ward was more frequently recommended for both schizophrenia and alcohol dependence. Notably, seeking help from a spiritual or religious advisor was comparably as popular among participants as seeking help from a psychologist or social worker. Despite differences in the attribution of causes, there were no significant differences between the treatments endorsed for antenatal depression and those recommended for postnatal depression.

The low recognition rates found in this study are similar to those found in other South African studies of mental health literacy among the public (Hugo et al., 2003; Sorsdahl et al., 2010; Sorsdahl & Stein, 2010). It is also consistent with findings from international studies conducted with women in the perinatal period, that women often have difficulty identifying symptoms of mental illness during pregnancy (Bilszta et al., 2010; Dennis & Chung-Lee, 2006; Fonseca et al., 2015; Hübner-Liebermann et al., 2012). The high levels of associating the symptoms of ante- and postnatal depression with a "normal response" suggest that, for pregnant women at least, the signs and symptoms of this mood disorder are frequently indistinguishable from other typical behaviours and experiences associated with pregnancy. This appears to be supported by this study's finding that the most frequently identified cause of mental illness during the perinatal period are factors directly related to pregnancy (or motherhood) itself, as Bilszta et al (2010) also found.

As in other studies, stress was the most widely supposed cause of mental illness, however, unlike other studies, this study found that intrapsychic factors in general (such as, overthinking, lack of willpower, and expecting too much of oneself), more than psychosocial stressors, were most frequently thought of as causing mental illness (Hugo et al., 2003; Sorsdahl et al., 2010; Sorsdahl & Stein, 2010). While intrapsychic factors are also highly ranked as causes in other studies, this subtle difference might suggest some disparities in the perceptions of pathogenesis, where endogenous factors are more likely to be ascribed to perinatal mental illness, than non-perinatal mental illness. This has important implications for the particular emphases that psycho-education programmes for perinatal women might need to employ in order to promote mental health literacy among women during this time.

Where treatment is concerned, similarities to other studies included the preference for professional psychological services, and lifestyle and self-help options, such as talking to

friends, but less confidence in medication (Hugo et al., 2003; O'Mahen & Flynn, 2008; Sorsdahl & Stein, 2010). The perception of religious or spiritual advice being helpful approximated the perceived benefit of consulting a psychologist or social worker. This finding might point to another potential point of intervention, where religious and spiritual leaders might be trained to deliver appropriate interventions. As in other studies, medication and medical treatments were more widely endorsed for treating schizophrenia, while psychotherapy was not (Mbanga et al., 2002; Sorsdahl & Stein, 2010). It is possible that the uncommon and overtly unusual symptoms of schizophrenia highlight how symptoms of other disorders might more easily be accepted as consistent with the experience of being pregnant. That some of the symptoms of depression are indistinguishable for many participants from the physical and emotional experiences associated with pregnancy suggests that the medicalisation of common mental disorders is not widely accepted, with the consequent risk that many women who are depressed may go undiagnosed and untreated. Furthermore, given that models of mental illness are complex, diverse and exist within particular socio-cultural contexts (Atilola, 2015), it is important to bear in mind that the disorders portrayed in the vignettes refer to definitions of mental illness as prescribed by the medical model, and do not account for alternative conceptualisations of mental illness; their causes, or their treatments. Additionally, low recognition rates evidenced in this study did not predict inappropriate help-seeking behaviours. Despite the signs and symptoms described in the vignettes not being associated with mental illness, professional psychological and counselling services were still perceived to be the most beneficial interventions. In this respect then, positive public health outcomes are in evidence, where beneficial help-seeking seems more important than accurate identification.

To the best of our knowledge, differences in the perceptions of ante- and postnatal depression have not previously been studied. This study's findings regarding the differences in the causes ascribed to each are especially interesting given that the symptoms described in both vignettes were the same. The only differences between the two hypothetical cases were circumstantial. Implicating work difficulties as a greater cause of postnatal depression may simply reflect women's perceptions of postnatal life and an assumption that more women work after the birth of the baby than during pregnancy. Where other significant differences in causes were found, postnatal depression was more likely to be attributed to brain disease, heredity or genetic factors, and witchcraft or possession by evil spirits. Also, where one in five participants provided a medical diagnosis for postnatal depression symptoms, not one participant from the

antenatal depression group thought a medical diagnosis appropriate. This seems to suggest that postnatal depression may be seen as more pathological, than depression during pregnancy.

The study has several limitations. Convenience sampling from one MOU means that the results may not be generalisable to all South African women in the perinatal period. Second, the limited qualitative data restricts our ability to develop more nuanced understandings of how mental disorders are perceived by women during the perinatal period. Third, while vignettes are useful tools to elicit participant responses, their use has been criticised, primarily because they are usually adapted for the target population and so are not standardised (Furnham & Hamid, 2014). Furthermore, vignettes may not provide sufficient information for participants regarding the nature of the disorders.

Given the elevated prevalence of perinatal mental illness, particularly in South Africa, these findings are cause for some concern. An understanding of the ways in which communities perceive and conceptualise mental illness during the perinatal period cannot be overlooked as an essential foundation to the development of successful interventions and treatments. Postnatal screening programmes that incorporated mental health education have been shown to improve recognition of symptoms in a hypothetical case as well as improved abilities to self-assess and seek help (Buist et al., 2007). Developing mental health education that is socio-culturally aligned with South Africa's diverse population seems essential. Using local experiences and understanding of distress to inform the ways in which mental health and illness are communicated with patients must be at the heart of intervention development, as will be shown in Chapter 5. Furthermore, given that the findings of this study seem to suggest that some differences might exist between the perceptions of perinatal and non-perinatal mental illness, developing educational tools that address views that might be particular to this period is also important. Finally, with the integration of mental health into primary care and the advocacy for task-shifted interventions, investigating and developing mental health literacy among primary health care workers must also be prioritised in both research and practice.

This chapter examined the mental health literacy of pregnant women receiving antenatal care at one MOU, including their perceptions of the causes of CMDs and appropriate treatments. Given that the preferred treatment for mental disorders identified by the women in the present chapter was psychosocial interventions, the following chapter explores the feasibility, acceptability and preliminary responses of a task-shifted PST intervention adapted for the treatment of antenatal psychological distress.

CHAPTER 5

THE FEASIBILITY, ACCEPTABILITY AND PRELIMINARY RESPONSES TO A PST-BASED INTERVENTION IN THE TREATMENT OF ANTENATAL PSYCHOLOGICAL DISTRESS

5.1 Background

This chapter is the first part of a two-part answer to the final research question posed in Chapter 1. It examines the feasibility and acceptability of an adapted PST intervention to treat antenatal psychological distress from participants' perspectives, as well as the preliminary responses to the intervention. Chapter 2 provided a detailed review of task shifting, which is briefly summarised here.

While strongly endorsed, the evidence for effective task shifting interventions to treat mental illness is growing but still limited (Patel, 2012). Several studies in LMI countries lend support for task shifting models in the treatment and prevention of mental illness (see Buttorff et al., 2012; Chibanda et al., 2011; Kakuma et al., 2011; McInnis & Merajver, 2011; Patel et al., 2010; Petersen, Lund, Bhana, & Flisher, 2012; Petersen, Ssebunnya, Bhana, & Baillie, 2011). These findings were corroborated by the first systematic review of studies investigating the efficacy of treatments for perinatal mental illness in LMI countries. A meta-analyses of 13 studies with a variety of mental health outcomes found strong support for task shifting interventions delivered by NSHW under supervision (Rahman et al., 2013).

In South Africa, a handful of task shifting studies have targeted women in the perinatal period (Cooper et al., 2009; Le Roux et al., 2013; Richter et al., 2014; Sorsdahl et al., 2015), while the AFFIRM (Lund et al., 2014) and PRIME (Lund et al., 2012) trials are two ongoing studies that are also concerned with this population. Two of the three completed studies that targeted pregnant women specifically considered those living with HIV/AIDS (le Roux et al., 2013; Richter et al., 2014). All four studies adapted evidence-based therapies for implementation by lay or peer counsellors. To date, no studies have investigated the utility of using a RC to deliver interventions, despite their category having been designed to intervene at primary health care level.

As highlighted in Chapter 2, the utilisation of only evidence-based therapies is widely advocated (Fulton et al., 2011; Ginneken et al., 2011; Lund, Petersen, Kleintjes, & Bhana, 2012; Patel et al., 2009; Petersen, Bhana, & Baillie, 2012; Petersen, Bhana, & Swartz, 2012; Rochat et al., 2011) so as to ensure that only effective and empirically-supported treatments are employed in task shifting interventions (Kirmayer & Pedersen, 2014). As one of the WHO's *mhGAP*-recommended treatments (WHO, 2016), problem-solving therapy (PST) has garnered significant support as an easily adaptable, user-friendly and accessible modality (Chibanda et al., 2011; Cuijpers, van Straten, & Warmerdam, 2007; Gellis & Kenaley, 2007; Patel et al., 2009). Evidence suggests that PST is an effective treatment for several common mental disorders including mood (Bell & D'Zurilla, 2009; Cuijpers et al., 2007), anxiety (den Boer et al., 2004), psychological distress (van t'hof, Stein, Marks, Tomlinson, Cuijpers, 2011), and substance use disorders (Jaffee & D'Zurilla, 2009; Sorsdahl et al., 2014) in a broad range of sociocultural settings (Chowdhary et al., 2014; Pierce, 2012).

In LMI settings, while the evidence is still limited, it shows promise. For example, Chibanda et al. (2011) found that three to six sessions of PST delivered by lay workers significantly reduced CMD symptoms in a sample of 320 adults. Another study showed that levels of psychological distress were significantly lowered using a PST intervention in a South African sample of 103 participants (van't Hof et al., 2011). Also in South Africa, Sorsdahl et al. (2014) found a significant reduction in substance use three months post-delivery of a blended motivational interviewing and PST intervention in 20 participants. Most notably, Chibanda et al. (2014) found that, at six weeks post-intervention, the depression scores from a group of women receiving a PST intervention were significantly lower than those assigned to a group who received antidepressant medication. Despite the positive support for PST, the evidence base in the South African context, as well as for the treatment of perinatal psychological distress is very thin.

Given the comparatively recent recognition of the gravity of maternal mental illness, in LMI countries (Fisher et al., 2012); as well as the innovative nature of the task shifting model in mental health, there are extensive gaps in our knowledge: first, no systematic research has been conducted on the feasibility, acceptability and efficacy of interventions delivered by Registered Counsellors; and, second, exceptionally limited research has been conducted on the efficacy of task-shifted evidence-based interventions for women in the antenatal period, especially in South Africa. Third, while there is evidence to support the use of PST to treat

depression (Cuijpers et al., 2007), the evidence for its application to perinatal CMDS is very limited internationally, and absent locally. As such, the aim of this study was to investigate the feasibility, acceptability and preliminary outcomes of a brief PST intervention, delivered by a Registered Counsellor, aimed at reducing symptoms of psychological distress in women who present for antenatal care at one MOU in a low-income community setting.

5.2 Methods

This study employed a mixed methods approach. Quantitative data were collected to measure participants' preliminary responses to the intervention, while qualitative data was critical to exploring the feasibility and acceptability of the intervention. The study was conducted in the same MOU that was described in the previous chapter (see Chapter 4). Prior to conducting the intervention component of the study, two focus groups with 12 pregnant women were conducted. Women who met the study's general inclusion criteria, who were comfortable speaking either English or Afrikaans, and who were willing and able to participate in the focus groups were recruited to provide detailed feedback on the intervention materials so as to ensure that they were culturally appropriate.

5.2.1 Participants

Thirty-eight pregnant women who were over the age of 18 years; who scored 15 or more on the screening measure at the intake interview; who could provide written informed consent to participate in the study; and, who were willing to attend three appointments were recruited for the intervention.

5.2.2 Study procedures

Data collection took place between January 2015 and January 2016. Women who presented for their first antenatal appointment were screened using the Edinburgh Postnatal Depression Scale (EPDS) during the standard intake interview. Those who scored 15 or more on the scale were asked to accept a referral to the RC. If a participant agreed to the referral, the RC would establish that she met the study's inclusion criteria before providing her with an informed consent form (Appendix III). Thereafter, the RC would complete the baseline questionnaire with the participant and the first of three PST sessions would be delivered. Appointments for the second and third sessions would be scheduled. Administration of the baseline questionnaire would take approximately 40 minutes, while the PST sessions were typically 45 minutes in

duration. Any patients that were deemed to be at risk for suicide, or had signs or symptoms of psychosis or other serious pathology, were referred for specialist care via emergency services, as per the CHC's referral protocols. Follow-up contact was made to ensure that these participants received the necessary care.

Approximately three months after their last appointment with the RC, questionnaires were re-administered to participants in a second interview. These interviews were conducted by the researcher and two research assistants. In addition to completing the follow-up measures, short semi-structured interviews were conducted to explore the intervention's feasibility and acceptability (Appendix III). At the baseline and follow-up data collection points, participants were given a grocery store voucher of ZAR30 (approximately US$2) to thank them for their time.

5.2.3 Description of the PST intervention

The content and structure of the PST intervention used in this study was adapted from Sorsdahl et al. (2014). Adaptations were primarily target population-related, such that additional information and psycho-education was provided for women about the experience of pregnancy. The three sessions would typically proceed as follows:

Session 1: in addition to orienting the participant to the PST model, this session involved helping her identify what is most important to her life. Problems and worries would then be listed and categorised in one of three groups: problems that are not important (group A); problems that are important but unsolvable (group B); and, problems that are important and solvable (group C). A problem from the third group would then be selected and together, the RC and participant would together develop a step-by-step plan to solve the problem.

Session 2: the participant would be reminded of the PST model and a list of adaptive coping strategies would be discussed. A problem from the 'not important' category would then be selected and the ways in which coping strategies might be applied to these would be discussed. Additionally, a problem from the third group would be selected and together, the RC and participant would develop a step-by-step plan to solve the problem.

Session 3: again, the participant would be reminded of the model and then more coping strategies would be discussed. Thereafter, a problem from the 'important but unsolvable' category would be selected from the list made in the first session, and ways of coping with this

problem would then be discussed. Again, a problem from the third group would also selected and together, the RC and participant would develop a step-by-step plan to solve the problem.

All sessions incorporated worksheets intended for use during the session (contained in the work booklet - see Appendix III), as well as 'homework' assignments for participants to complete in between sessions.

5.2.4 Measures

Several measures were used to collect the data for this study (see Appendix III). Only English-language measures were used as the translations of some measures into Afrikaans and isiXhosa have not yet been validated[11].

Socio-demographic and obstetric information

Intervention participants were asked to provide a range of demographic information including age, highest level of education, place of birth, relationship status, race, religion, and home language. Information regarding participants' socio-economic status was gathered via questions adapted from SASH (Stein, Williams, & Kessler, 2009), pertaining to employment status, estimated personal and household income, access to social assistance such as government grants, type of dwelling and the ownership status thereof. Participants were also asked whether or not they had electricity, as well as certain household items such as a radio, television, telephone, fridge, computer, washing machine, and cell phone. Those who had four or less of these items were grouped into a low socioeconomic status (SES) group and those who had five or more were grouped into a high SES group (Morojele et al., 2010). Concerning obstetric information, participants were asked about gravidity and parity, previous pregnancy complications, and current gestation period.

Stressors and social support

Several instruments were used to collect data on participants' life experiences, both past and current.

[11] During the course of collecting the data presented in Chapter 5 from the same research site, the research team found that most first-language Afrikaans or isiXhosa speakers opted for the English versions of the materials.

i) *Life Events* (LE) (Kessler & Ustün, 2004): this section of the WHO's Composite International Diagnostic Interview (CIDI) asks participants to indicate whether or not they have experienced a range of life events in the last 12 months including, the death of a loved one, financial difficulties, assault, and serious illness.

ii) *Interpersonal Violence Questionnaire (IPVQ)*: a survey questionnaire used to screen for experiences of past and current of interpersonal violence. Questions such as "Have you ever been hit, slapped, kicked or otherwise physically hurt by your current or previous intimate partner?" will assist in establishing levels of IPV in this population.

iii) *Childhood Trauma Questionnaire- Short Form* (CTQ-SF) (Bernstein, Fink, Handelsman, & Foote, 1994): a self-report inventory to screen for childhood history of abuse and neglect, the CTQ asks respondents to select a score between 1 ("never true") and 5 ("very often") that best describes their experiences in relation to statements such as "People in my life hit me so hard that it left bruises or marks" and "I felt that someone in my family hated me".

iv) *Multidimensional Scale of Perceived Social Support* (MSPSS) (Zimet et al., 1988) used in this study is a 12-item scale that asks participants about their current perceptions and experiences of being supported or assisted by family members, significant others, and friends. Participants can provide one of a range of 7 responses, from "strongly agree" to "strongly disagree" to statements such as "my family really tries to help me" and "there is a special person in my life who cares about my feelings".

Preliminary responses

In order to assess the preliminary efficacy of the PST intervention, several measures were administered.

Primary outcomes:

i) *CMD symptoms:* The Edinburgh Postnatal Depression Scale (EPDS) (Cox, Holden, & Sagovsky, 1987) is a tool that is widely used in LMI contexts to screen for symptoms of perinatal depression and anxiety. Given that three of the items constitute an anxiety subscale (Matthey, 2008) it is an appropriate screening tool for perinatal CMDs and is the most validated tool in these contexts (Akena et al., 2012). The EPDS is a 10-item scale that asks participants to choose one of four possible responses to each item, that best describes how they have felt in the last seven days. A cut-off value of >14 was used to determine caseness, yielding binary categories of 'high' ($\geq$15) and

'low' (≤14) (Husain et al., 2014). Internal consistency reliability was good, with Cronbach's alpha calculated at 0.87.

ii) *Psychological distress*: Described in Chapter 3, the Self-Report Questionnaire (SRQ-20) (WHO, 1994) is a 20-item screening tool designed to screen for 'mental distress' expressed as symptoms associated with a range of common mental disorders, including depressive disorders, anxiety-related disorders, and somatoform disorders. A cut-off value of ≥8 was used to determine caseness, producing the binary categories of 'high' (≥8) and 'low' (≤7) symptoms of psychological distress (Baumgartner et al., 2014; Stewart et al., 2014). The SRQ-20 has repeatedly been shown to have satisfactory sensitivity and specificity, with high convergent validity (Hanlon et al., 2008). Internal consistency was good, with Cronbach's alpha calculated at 0.76. The SRQ20 provided data regarding the broader experience of psychological distress at the same pre- and post- intervention points.

Secondary outcomes:

i) *Functional impairment:* The Sheehan Disability Scale (SDS) (Sheehan, Harnett-Sheehan, & Raj, 1996) was used to assess functional impairment in three inter-related domains; work/school, social and family life. On a scale of 0, being "not at all" to 10, being "extremely", participants were asked to rate the degree to which their experience of symptoms has disrupted their lives in all three domains.

ii) *Self-reported substance abuse:* Also described in Chapter 3, the ASSIST (Alcohol, Smoking, and Substance Involvement Screening Test) (WHO Assist Working Group, 2002) was used to investigate self-reported substance use (Humeniuk et al., 2010). On this 8-item screening questionnaire, a Specific Substance Involvement Score can be obtained for each substance, which reflects hazardous, harmful, or dependent use of alcohol, tobacco, and other psychoactive substances used, over three months prior to the interview. Scores of three or less (10 for alcohol) indicate lower risk of problems related to substance use, while scores between 4 (11 for alcohol) and 26 reflect moderate risk, and 27 or higher: high risk (Humeniuk et al., 2010).

iii) *Problem-solving skills:* The Social Problem-Solving Inventory Revised (SPSI-R; D'Zurilla et al., 1996) is a 25 item self-report questionnaire, with five subscales that assess functional and dysfunctional problem-solving skills. Each subscale consists of five items, each on a five-point Likert scale of 0, "not at all true of me" to 4, "extremely true of me", and represents a particular style or orientation to cognitive and emotional

aspects of problem-solving. These styles are: Positive Problem Orientation (PPO), for example, “When I am faced with a difficult problem, I believe that I will be able to solve it on my own if I try hard enough”; Negative Problem Orientation (NPO), for example, “When I can’t solve a problem, I get very frustrated”; Rational Problem Solving (RPS), for example, “When I have a problem to solve, one of the first things I do is get as many facts about the problem as possible”; Impulsivity-Carelessness Style (ICS), for example, “When I am trying to solve a problem, I go with the first good idea that comes to mind”; and, Avoidant Style (AS), for example, “If I avoid problems, they will generally go away on their own”. Higher scores on the PPO and RPS subscales indicate more adaptive approaches to problem-solving, while higher scores on the remaining NPO, ICS and AS subscales suggest less functional problem-solving patterns. This scale has been validated in the South African context (Sorsdahl, Stein, & Myers, 2015) and has a good internal consistency reliability, with Cronbach’s alpha calculated at 0.76.

iv) *Perceived Stress Scale (PSS)* (Cohen & Kamarck, 1983): on this scale, participants were asked to respond on a scale of 0 (“never”) to 4 (“very often) to a series of 10 questions that assess for levels of perceived stress, including factors such as being overwhelmed and feeling out of control. Internal consistency reliability was deemed acceptable, with Cronbach’s alpha calculated at 0.72.

Qualitative data

A short semi-structured interview (see Appendix III for the interview schedule) was conducted with each participant during the follow-up interview. During the interview, participants were asked to provide feedback regarding their experience of the intervention, including the aspects that they considered to be the most and least useful. They were also asked if they would attend a similar intervention in the future and whether they would recommend it to a friend, and to provide reasons for their answers. If participants terminated their participation prematurely, they were asked to respond to a list of possible reasons. Finally, participants were asked to provide recommendations for future interventions.

5.2.5 Training and supervision

A detailed description of the training and supervision of various stakeholders is provided in Chapter 6. For the purposes of this chapter, it is worth noting that intake nurses received

training to use the EPDS and two refresher sessions. The RC received 18 hours of training in the PST model. Fidelity to the intervention was ensured primarily in two ways: weekly hour-long supervision sessions with the RC, and randomly reviewing the recordings of sessions.

5.2.6 Data management

The RC kept a file for each participant in a locked cabinet in her office at the MOU. Files contained completed signed consent forms, contact information, baseline questionnaires, case notes, supervision notes, follow-up information, as well as any other material relevant to the participant in the context of the project. Quantitative data from paper-based questionnaires were captured on SPSS version 23.0. All baseline interviews, PST sessions, follow-up interviews, were audio-recorded in digital format. Once the qualitative data were transcribed, the recordings were destroyed in order to protect the confidentiality of the participants.

5.2.7 Data analysis

Quantitative data were analysed using SPSS version 23.0. Participants' socio-demographic data was analysed with descriptive statistics. The Shapiro-Wilks test was used to test the preliminary response data for normal distribution. Since data from some measures were found to be non-Gaussian, both the paired *t*-test and the Wilcoxon signed-rank test were used to analyse responses. The same responses were in evidence using both methods.

Qualitative data were analysed in NVivo 11 using the Framework Method (Pope, Ziebland, & Mays, 2000). This approach to thematic analysis involves a series of stages that include familiarisation with the material; coding the transcripts; developing an analytical framework; applying the analytical framework by indexing; charting data into the framework matrix; and, interpreting the data.

5.3 Results

This section is divided into three parts. The characteristics of the sample are described first. The quantitative data pertaining to participants' preliminary responses to the intervention is reported thereafter. Finally, the qualitative data is presented regarding the interventions' feasibility and acceptability from the women's perspectives.

5.3.1 Socio-demographic and obstetric characteristics of PST intervention participants

Demographic characteristics

The demographic characteristics of the sample are presented in Table 5.1. Of the sample of 38 participants, more than two thirds (71.1%) were over the age of 25 years and just more than half (55.3%) were in partnered relationships. For most of the sample (63.2%), primary school was the highest level of education attained. Almost a third (28.9%) had completed high school, while only three (7.9%) participants had completed a tertiary qualification. The majority of the sample identified as 'Coloured' (78.9%), while the remaining 21.1% identified as 'Black African'. One fifth (21.1%) reported belonging to the Muslim faith, while 78.9% reported being Christian. English (36.8%) and Afrikaans (42.1%) were the main languages reportedly spoken at home.

Table 5.1 The demographic characteristics of the PST intervention sample (N = 38)

	Total sample	**% of sample**
Age		
18-24 years	11	28.9
≥ 25 years	27	71.1
Relationship status		
Partnered	21	55.3
Unpartnered	17	44.7
Highest level of education completed		
Primary school	24	63.2
High school	11	28.9
Tertiary qualification	3	7.9
Race		
Black African	8	21.1
Coloured	30	78.9
Religion		
Muslim	8	21.1
Christian	30	78.9
Main languages spoken at home		
English	14	36.8
Afrikaans	16	42.1
isiXhosa	3	7.9
Other indigenous South African languages	3	7.9
Other languages	2	5.3

Socio-economic status

Factors associated with socio-economic status are described in Table 5.2. Approximately one third (34.2%) of the sample had some form of employment at the time of their participation in the study, while almost two thirds (57.9%) earned less than a monthly average of R1000 (±<US$ 74) over the previous six months. The majority (65.8%) of participants' average monthly household income over six months fell in the range of R1000-R5000 (±US$ 74-370) per month. More than half (55.3%) of the sample were registered to receive childcare grants from the state. One third (34.2%) lived in impermanent structures such as shacks and more than half (55.3%) reported that they owned their place of residence. Most participants (89.5%) reported that they shopped at supermarkets and while more than half (55.3%) reported having access to financial services such as bank accounts or credit cards, only 21.1% reported having an account at a retail store.

Table 5.2 Factors associated with socio-economic status in the PST sample (N = 38)

	Total sample	**% of sample**
Employment status		
Unemployed	17	44.7
Unemployed by choice (student, homemaker)	8	21.1
Employed (full-time or part-time)	13	34.2
Social assistance		
None received	17	44.7
Childcare grant recipient	21	55.3
Own average monthly income		
< R1000/month (< ±US$ 74)	22	57.9
R1000-R5000/month (±US$ 74-370)	13	34.2
R5000-R10000/month (±US$ 370-740)	3	7.9
Average household monthly income		
< R1000/month (< ±US$ 74)	4	10.5
R1000-R5000/month (±US$ 74-370)	25	65.8
R5000-R10000/month (±US$ 370-740)	7	18.4
> R10000/month (> ±US$ 740)	2	5.3
Dwelling type		
Impermanent structure	13	34.2
Brick-and-mortar structure	25	65.8
Ownership status of residence		
Owned	21	55.3
Rented	12	31.6
Informal settlement	3	7.9

Other	2	5.3
Consumer practices		
Shop at supermarkets	34	89.5
Use financial services (bank account, credit card)	21	55.3
Retails store account	8	21.1

Obstetric factors

As reflected in Table 5.3, the mean gestation of participants at their first counselling sessions was 18.08 weeks (SD = 6.62). On average, participants had had 2.03 (SD = 1.53) previous pregnancies and 1.5 (SD = 1.16) children under the age of 18 years at the time. The mean number of previous miscarriages was at 0.34 (SD = 0.71), while the mean number of previous pregnancy terminations and stillbirths were both at 0.08 (SD = 0.36). For six participants (15.8%), this pregnancy was their first, while 13.2% of the sample had experienced complications during their last pregnancies.

Table 5.3 Obstetric factors associated with the PST sample (N = 38)

	Mean	**Std. deviation**
Current gestation (weeks)	18.08	6.62
Previous pregnancies	2.03	1.53
Children under 18 years	1.50	1.16
Previous miscarriages	0.34	0.71
Previous terminated pregnancies	0.08	0.36
Previous stillbirths	0.08	0.36
	Total sample	**% of sample**
Complications during last pregnancy	5	13.2
First pregnancy	6	15.8

Stressors and social support

Traumatic and stressful life events experienced by participants are reported in Table 5.4. In the last 12 months, more than a third (34.2%) had been the victim of a serious attack or assault. More than half (52.6%) reported having lost a loved one and almost half (44.7%) separated from an intimate partner in the previous year. Almost two thirds (57.9%) reported being unable to find work, while the same number described experiencing a major financial crisis in that time. Relational problems were prominent, with the majority (86.8%) reporting ongoing problems with family members or relatives. Perhaps linked to this, 65.8% reported ‘sometimes

or often' experiencing physical abuse, while 71.1% reported the same of verbal and emotional abuse. Since becoming pregnant, 15.8% had experienced physical abuse.

High rates of childhood trauma and abuse were reported. On the overall scale of abuse severity, more than two thirds of the sample had experienced abuse that ranged across the categories of 'moderate to severe' (39.5%) and 'severe to extreme' (31.6%). Almost a quarter (23.7%) reported having experienced physical abuse that was categorised as 'severe to extreme'. More than half (52.7%) reported emotional abuse that ranged between 'moderate' and 'extreme'. Childhood sexual abuse also appeared to be common in this sample, with almost a quarter (23.7%) experiencing sexual abuse that fell in the 'moderate to severe' category, and 18.4% in the 'severe to extreme' category.

Table 5.4 Stressors and social support experienced by the PST sample (N = 38)

	Total sample	**% of sample**
Life events in the last 12 months		
Serious illness/injury	10	26.3
Victim of serious attack/assault	13	34.2
Robbed/home burglarised	4	10.5
Something valuable lost/stolen	9	23.7
Death of anyone close	20	52.6
Separation from partner	17	44.7
Break-up of another relationship	16	42.1
Fired from job	1	2.6
Losing job for other reason	7	18.4
Unable to find work for more than a month	23	57.9
Major financial crisis	22	57.9
Problems with police	1	2.6
Close person suffered illness, injury or attack	16	42.1
Ongoing problems with family	33	86.8
Ongoing problems with close friend/s	11	28.9
Ongoing problems with anyone at work	5	13.2
Interpersonal violence		
Physical abuse experienced often/sometimes	25	65.8
Forced sex experienced often/sometimes	5	13.2
Verbal abuse experienced often/sometimes	27	71.1
Physical abuse since pregnant (often/sometimes)	6	15.8
Forced sex since pregnant (often/sometimes)	3	7.9
Pressure to get pregnant (often/sometimes)	3	7.9

Childhood trauma			
Physical neglect:	None/minimal	20	52.6
	Low to moderate	3	7.9
	Moderate to severe	8	21.1
	Severe to extreme	7	18.4
Physical abuse:	None/minimal	18	47.4
	Low to moderate	9	23.7
	Moderate to severe	2	5.3
	Severe to extreme	9	23.7
Emotional neglect:	None/minimal	14	36.8
	Low to moderate	7	18.4
	Moderate to severe	8	21.1
	Severe to extreme	9	23.7
Emotional abuse:	None/minimal	10	26.3
	Low to moderate	8	21.1
	Moderate to severe	5	13.2
	Severe to extreme	15	39.5
Sexual abuse:	None/minimal	18	47.4
	Low to moderate	4	10.5
	Moderate to severe	9	23.7
	Severe to extreme	7	18.4
Overall severity of childhood abuse			
	None/minimal	3	7.9
	Low to moderate	8	21.1
	Moderate to severe	15	39.5
	Severe to extreme	12	31.6

5.3.2 Preliminary responses to the PST intervention

Data pertaining to participation in the intervention are outlined in Table 5.5. Of the 38 women who participated in the study, 15 (39.5%) attended all three sessions, nine (23.7%) attended two sessions and 14 (36.8%) attended one session. The average number of sessions attended by all participants was 2.03 (SD = 0.89). The mean number of weeks that elapsed between the first and the second sessions was 2.12 (SD = 1.68), and between sessions two and three, 2.00 (SD = 1.16). Preliminary response data for 22 (57.8%) participants were obtained. Sixteen participants were lost to follow-up due to several reasons including: withdrawal from the study, relocation to another area, a change in contact number, and scheduling conflicts. Of those who

participated in the follow-up interview, 10 (45.5%) completed all three sessions, five (22.7%) completed two sessions, and seven (31.8%) completed only one session.

Table 5.5 Factors associated with intervention participation (N=38)

Number of sessions (m,sd)	2.03	0.89
Participants who completed 1 session (n, %)	14	36.8
Participants who completed 2 sessions (n, %)	9	23.7
Participants who completed all 3 sessions (n, %)	15	39.5
Time between session 1 and 2 (weeks) (m, sd)	2.12	1.68
Time between session 2 and 3 (weeks) (m, sd)	2.00	1.16
Number of defaulted sessions (m, sd)	1.21	0.96
Time to follow-up (weeks after last session) (m, sd)	13.23	0.87
Participants lost to follow-up (n, %)	14	36.8

Primary and secondary outcomes

Several significant gains were seen on both primary and secondary outcome measures, as reflected in Table 5.6. Preliminary responses to the primary outcomes were positive, with significantly decreased EPDS scores (z = -3.0, $p < 0.01$) as well as SRQ-20 scores (z = -3.5, p = <0.01). Correspondingly, impairment to functioning was also reduced, with all three Sheehan disability scales reflecting less disruption to work (z = -2.3, p = 0.02), social life (z = -3.3, $p <$ 0.01), as well as family and home responsibilities (z = -2.5, p = 0.01). Perceived Stress Scale scores were also significantly reduced (z = -3.4, $p < 0.01$).

In the area of problem solving skills, significant changes were seen on two of the five dimensions. Scores on the 'negative problem orientation' (z = -3.1, $p < 0.01$) and the 'avoidant style' (z = -3.0, $p < 0.01$) subscales were significantly reduced. Changes in the remaining problem-solving styles were all in the right direction, but none significantly so. On the ASSIST, neither the alcohol nor the tobacco involvement scores showed any significant changes. The same held true for the MSPSS, with no significant differences observed between baseline and follow-up scores of social support on the friends, family or significant subscales.

Table 5.6 Participant pre-post differences in outcome measures (N = 22)

	Pre-intervention		Post-intervention		Comparison			
	Mean	**SD**	**Mean**	**SD**	**Mean difference**	***SE***	***z***	***p*-value**
CMD symptoms (EPDS)	19.7	3.8	13.7	6.8	6.0	1.5	-3.0	<0.01*
Psychological distress (SRQ20)	15.0	2.8	8.7	5.8	6.3	1.2	-3.5	<0.01*
Disruption in functioning (Sheehan)								
Work	6.0	3.2	3.6	3.4	2.5	0.9	-2.3	0.02*
Social life	8.2	2.2	1.5	1.6	6.8	0.5	-3.3	<0.01*
Family life	7.1	3.2	1.8	1.5	5.6	1.0	-2.5	0.01*
Perceived Stress (PSS)	31.5	5.2	22.3	9.2	9.1	2.0	-3.4	<0.01*
Problem-solving (SPSI-SF)								
Positive problem orientation	7.4	3.6	7.6	3.9	-0.2	0.9	-0.1	0.89
Avoidant style	14.3	5.3	9.0	5.8	5.3	1.5	-3.0	<0.01*
Rational style	15.5	6.2	17.9	7.4	-2.5	1.7	-1.4	0.15
Impulsivity-careless	8.7	4.3	6.6	4.1	2.1	1.1	-1.7	0.09
Negative problem orientation	14.1	4.2	9.4	5.7	4.7	1.2	-3.1	<0.01*
Substance abuse (ASSIST)								
Tobacco involvement score	13.6	13.5	12.9	11.6	0.7	1.6	-0.9	0.39
Alcohol involvement score	4.7	6.3	5.0	9.0	-0.3	2.0	-0.1	0.89
Social support (MPSS)								
Significant other	20.9	7.3	22.7	6.6	-1.8	1.1	-1.4	0.17
Family	14.8	7.7	15.9	8.7	-1.1	1.9	-0.9	0.38
Friends	16.0	8.7	17.7	8.2	-1.7	2.2	-0.7	0.51
Overall social support	51.7	16.0	56.3	19.0	-4.6	3.5	-1.1	0.29

* Significant at the 95% confidence interval (p<0.05)

5.3.3 Feasibility and acceptability of the intervention

Analysis of the data from participants' follow-up interviews reflected several themes: (a) perceived utility of the intervention, (b) the most unhelpful or least useful aspects of the intervention, (c) the outcomes or benefits experienced, (d) perceived barriers to accessing the programme, and (e) recommendations for the improvement of the intervention. The RC is identified by the initial 'M'.

a) Perceptions of the interventions utility

All but two of the participants who were interviewed felt that the intervention was helpful to them and that they derived some benefit from it. For the majority of participants, the opportunity to talk to and confide in someone with whom they felt comfortable, about their problems, was perceived to be the most helpful aspect of the intervention. The fact that the RC

was a stranger and not personally known to participants was particularly important, as was the experience of not being judged for their problems. As these participants recount:

> *"I found out I was pregnant I didn't want the baby, all of that and - - it was so painful for me but - - really after talking to her it just - - to speak to someone that's not family man, someone you don't know really helped, it's almost like it's just a burden off your shoulders, it's really helpful - - since the first session we had I could see a light again and I could actually feel that this is my baby - - whether I like it or not I just have to deal with it and since then, everything was fine."* (Participant #26, age 28)

> *"Yes - - because I was comfortable with M - - I had the chance to talk about myself - - you know - -there was no judgment - - like what others say."* (Participant #6, age 26)

> *"It gave me the chance to - - to open up to a friend who didn't judge me - - also one who didn't break my confidence."* (Participant #21, age 26)

> *"First of all - - you are in a comfortable zone - - being with someone that is neutral, being able to talk - - it's a good space."* (Participant #7, age 26)

The significance of an opportunity to express themselves was extended to the PST work-booklet. For many participants, the booklet was useful in that it provided information but also served as a container for difficult thoughts and feelings between sessions and once the intervention was over.

> *"In the booklet - - there were tips - - I went to Google to get more information about giving birth - - I didn't know what to expect - - but M helped me think of solutions to my problems - - it was good advice and and I didn't have anyone to direct me - -so it made me get more information and ask other people."* (Participant #8, age 19)

> *"I want to say that book was helping me - - that small book that M give to me - - that one - - I can do whatever I want to - - I can write it down what is right today, what is wrong tomorrow like that."* (Participant #18, age 29)

In this way, the booklet seemed to function not only as an extension of the counselling process, but also as an important placeholder for the counselling itself, providing participants with the means to meaningfully organise their thoughts and experiences, as highlighted by these participants:

> *"The most thing that help me - - is to write - - that I must be the person I am - - everything that happens I must write it. When you write then you've got the relief - - and then umm- - it's not – it's not easy to talk to someone each and every time, because there's no one here to ((talk to)) I must write a diary - - a diary book that I write."* (Participant #33, age 26)

> *"The things what's really helped me is to - - before I did - - before when I didn't get any any any ((sessions)), it was not easy to ((talk)), it was just thinking and thinking and thinking, with no answer, with no questions, you just think - - but now because of what I say before - - that book was helping me a lot because I was just when I start to think I must just there and I see what I'm thinking, what it's good for, why I'm thinking, why why I must - - like why I'm thinking and - - and when I write it down - - I just write it down and I said 'okay, this thing I'm supposed to not thinking like that, I must do that to to to make it better'. Ja it was helping me a lot - - really."* (Participant #18, age 29)

The utility of the booklet as a place to practice some of the PST principles seems clear from these examples. Some participants appreciated the pragmatism of the approach and others referred directly to the problem-solving aspects of the intervention as useful. As these participants noted:

> *"The most important - - I think - - being able to categorise my problem - - you know - - being able to identify my problems - - and work from there."* (Participant #7, age 26)

> *"But M helped me think of solutions to my problems - - it was good advice and - - and I didn't have anyone to direct me - - so it made me get more information and ask other people."* (Participant #8, age 19)

> *"Umm - - how - - how she taught me how to sit and think and not allow my thoughts to run through my mind but to to - - allow it to let it stop and so on - - yes - - think more about the positive things."* (Participant #24, age 23)

For other participants, the opportunity to hear another perspective, to talk about past experiences, or to have time to themselves was most important:

> *"Yes – yes - - it's nice listening to other person's point - - uh – uh point of view – and then I can understand myself better."* (Participant #16, age 34)

> *"But it - - it was also a time to have for myself - - time to speak to someone about what is worrying me - - M was my light. You know - - I could also get away from the people at home."* (Participant #21, age 26)

From these descriptions it may be that the PST-specific factors of the intervention were less central to participants than having the RC's impartial and empathic ear. In fact, nearly all participants reported that they either had already recommended or would in future recommend such a programme to friends and this was a frequently cited reason for their recommendation. As shown in the following extracts:

"Yes - - sure, ja I would. Like I said it's always good to talk to someone that don't know you - - I think it's best just to speak - - just to get it off your shoulders, I think it's - - it will help - - so I will suggest someone to come." (Participant #26, age 28)

"Yes I would, I would encourage them to go - - because it helped me, it can help them as well - - umm I was emotional ahhh if I talk or someone spoke to me then tears would come- would run down my face - - and then I learned to control that - - I learned to control the problems I have and how to solve it and what to do and so on. That is how it helped me." (Participant #24, age 23)

b) <u>The least useful aspects of the intervention</u>

Most participants reported that they could not name an aspect of the intervention that was not helpful or useful. Two participants reported that they did not find the intervention helpful at all (one of these still attended all three sessions). While both seemed to suggest that their objections were related the RC's counselling style, it is possible that the PST model was a poor fit for them both.

"You know - - there wasn't really space for me to talk - - we were just reading out of the booklet - - and then - - and then - - you know the solutions were just too specific. I know - - maybe some people like that but I kind of feel if I have a problem - - I want to talk about it - - you know?" (Participant #5, age 24)

"Not really - - ummm I don't know I just didn't fancy it somehow…It's just - - everything was so babyish and I'm not like that so - - I didn't quite like it - - the way she said things - - or how she said it - - It just seemed fake to me and I didn't feel much comfortable. I don't know - -" (Participant #19, age 29)

They clearly experienced the directive and structured nature of the approach as restricting and even condescending.

"Honestly - - if I must be honest - - nothing was helpful. She's just too bossy for me." (Participant #5, age 24)

"The booklet is like you're sitting at school and you must just - - you must just sit quietly and listen." (Participant #5, age 24)

For one of these two participants, as well as some of the others, the baseline questionnaire administered prior to the first PST session appears to have contaminated their experience of the intervention:

"There were a lot of questions! Maybe some questions - - asked in a different way." (Participant #10, age 31)

"Mmm – most of it was helpful - - those questions in the beginning - - I didn't like those at all - - I didn't like opening up." (Participant #13, age 32)

"I just didn't feel comfortable much with it. I think it was just the questions that she asked me." (Participant #19, age 29)

Despite one participant's appreciation for the ways in which the model helped her to better manage distressing thoughts, she also made an important observation about the limits to the PST approach for someone who lives in poverty:

"I can think because I've got children, you see, I've got no job, I must make something for my children, but everything it's use the money, you must have the money - - you just think and keep thinking "where must I get the money? Where must I do that?" - - but the only thing is – is – is to stop thinking - - I can't stop thinking - - I must think ja." (Participant #18, age 29)

In this instance, this participant highlights the tension between the need to think about how to find money and the anxiety and stress that these thoughts generate for her.

c) Experiences of the intervention's benefits

Many participants reported that the intervention's most significant benefits for them lay in the development of better coping mechanisms and a greater sense of mastery over thoughts, emotions and problems.

"Umm - - how - - how she taught me how to sit and think and not allow my thoughts to run through my mind but to to - - allow it to let it stop and so on - - yes - - think more about the positive things." (Participant #24, age 23)

"I was emotional ahhh if I talk or someone spoke to me then tears would come- would run down my face - - and then I learned to control that - - I learned to control the problems I have and how to solve it and what to do and so on." (Participant #24, age 23)

"I am coping very well - - I can cope with the stress and the problem solving - - I cope better with this baby." (Participant #10, age 31)

"Now I'm dealing with that pain so - - I try to deal with it – I don't keep it in now - - I just - - so I don't get the depression." (Participant #33, age 26)

This self-efficacy in turn lead to more positive feelings in general about themselves, as well as greater determination and hope. This is seen in these participants' statements:

"Because it did help me a lot and it made me stronger and - - I feel a better person." (Participant #27, age 24)

"I got help - - I was very relieved - - I was feel like I'm new - - I'm a new person so there's nothing that was ahhh I didn't like." (Participant #33, age 26)

"I really learnt that if I - try to do something - - I must not give up I must just try harder." (Participant #38, age 29)

For some participants, these benefits were linked to improved relationships or social contact. Some saw better relationships with people close to them, while others found they were more able to seek out social experiences than before, as this participant reveals:

"I wasn't so – s- sure at first but the sessions really helped - - with my relationship - - things at home. I found I had solution after - - I was a troubled person and to think low of myself. Now I can open conversations with people which I couldn't do before - - I'm going to groups now and helping other people also." (Participant #13, age 32)

Two participants spoke about using what they had learned from the intervention to help others, even going so far as to make copies of the booklet for friends. One participant even arranged to meet with her friends to show them the material and teach them about the model at the same time that her weekly appointment with the RC had been:

"Yes – yes - - yes! Because I help two women- they in my area - - I just photocopy that book - - um - - I – I photocopy the pages that I know is - - that is really they need it and we just stay - - like on Wednesday - - last year and this year in January - - I was used to come on Wednesday when we sitting doing nothing I just come with that papers - - I just teach them to learn how to think, how to cope with nothing, like when you don't have nothing in your hands you can't just keep thinking like, like - - you getting mad when you thinking like you never - - no one answer you, you just thinking and thinking and you not asking even anyone in the house, you see? - - I said 'no, that paper is going to be right - - you must write it down there, all that things that you think and you take that one that is you know that every time it's coming on your mind, even if you sitting or you sleeping, just put it one side' - - all the stuff I just tell them - - I teach them. Mmm the more I help others, the more I'm healing myself." (Participant #18, age 29)

d) <u>Perceived barriers to accessing the intervention</u>

Participants who had defaulted on appointments with the RC or had prematurely terminated their participation in the programme provided several reasons. The most widely reported barrier

to attending appointments were structural and primarily related to lack of finances. Linked to this, transport (or the money for transport) to the clinic was also cited as a reason.

> *"I'm not working now - - the only thing is making me to not go to the sessions is I don't have the money."* (Participant #33, age 26)

> *"I didn't have - - I didn't have money - - and I didn't want to ask people to help me with money - - I'm tired of having to ask people to help me with money - - (( )) so I decided not to come."* (Participant #38, age 29)

> *"...just difficult sometimes to get to the clinic because of the weather and - - and transport."* (Participant #16, age 34)

Childcare and work commitments also presented obstacles to attending sessions:

> *"Okay all her available times, then I was busy - - um it was either work or I had to be by my child's school."* (Participant #24, age 23)

Two participants highlighted the role that the stigma associated with attending counselling sessions at the MOU might play, as a barrier to those who might need help but do not access it:

> *"There's lots of girls who need help - - but at the clinic they won't go - - people will think something is wrong with you - - people will ask you 'why are you going in there? Is there a sister inside?'"* (Participant #13, age 32)

One participant suggested that women might be afraid that their infants will be removed from them if they ask for help.

> *"Some people have an attitude about having to ask for help - - they look at it as a - - as a sickness and don't want help. Like people who need sessions and worry that this and that will be taken away from them."* (Participant #16, age 34)

e) <u>Recommendations for the improvement of the intervention</u>

Many participants felt that the intervention could not be improved and was acceptable the way that it was. Of those who did provide recommendations, many felt that group sessions would be beneficial in providing support:

> *"Mmm - -maybe like a advice or or - - a support group - - for first time mothers."* (Participant #31, age 25)

Those that recommended that the intervention be made available at other locations did so either due to practical difficulties in accessing the clinic, or to protect participants from the stigma associated with receiving mental health services.

> *"Ja house-visiting - - and stuff like that - - that will help - - for me because I am staying very far from the clinic - - maybe have it at other clinics."* (Participant #15, age 38)

> *"...and maybe also go to places...but at the clinic they won't go - - people will think something is wrong with you."* (Participant #13, age 32)

Three participants felt that the number of sessions were inadequate and that more or longer sessions would improve the intervention:

> *"Well - - longer sessions - - longer sessions because you just deal with this and now you get to - - not a breaking point but you know - - you get to a point where you think - - where you feel - - there's still a lot for you to resolve but the sessions is too short."* (Participant #20, age 31)

Finally, two participants felt that increasing awareness about the intervention, as well as about asking for and accessing help, would be an improvement to the programme.

> *"Mmmm - - I think trying to - -to make people understand more about getting help."* (Participant #16, age 34)

> *"I can't really say improve it - - just to create more awareness - - you know - - about the counselling in general - - increase the emphasis of the programme."* (Participant #7, age 26)

5.4 Discussion

This is the first study in South Africa to investigate the feasibility, acceptability and preliminary responses to an adapted PST intervention that was delivered at a MOU by a Registered Counsellor, for pregnant women who are psychologically distressed. The results from the study have yielded some important findings. Where preliminary responses to the intervention were concerned, significant gains were seen on both primary outcome variables. In keeping with the findings of other studies (Chibanda et al., 2011a, 2011b; van't Hof et al., 2011), results showed reduced symptoms of CMDs and psychological distress. Consistent with a reduction in symptoms, improved functioning was seen on the work, social and family/home dimensions of

the Sheehan Disability Scale. While improvements in problem-solving skills were limited to reductions in the avoidance style and negative problem orientation, these findings are still promising. They suggest that at the very least, these participants are less likely to feel as pessimistic about their problems and more likely to confront problems, than they might have before the intervention.

Retention rates of almost 40 per cent for the full intervention, while not high, appear to be in keeping with antenatal mental health interventions conducted in other settings (Clatworthy, 2012; Joshi et al., 2014). One systematic review found that low-income women are more likely to discontinue therapeutic treatments prematurely, for several reasons that appear to be related to socio-economic status (Levy & O'Hara, 2010). Indeed, barriers such as lack of transport or money and work commitments were often cited by participants in this study as reasons for premature termination or defaulting on appointments, which appear to be common among perinatal populations (Goodman, 2009; O'Mahen & Flynn, 2008). Since many participants could not be reached for follow-up interviews, it is difficult to know the full range of barriers experienced by them. It is possible that the reasons that they were not available to complete their follow-up interviews were the same reasons for withdrawing from the intervention. Furthermore, given that the sample are known to have screened positive for psychological distress, it is also plausible that unresolved symptoms themselves represented a barrier to care. Another barrier to accessing the intervention may have been stigma. Some participants suggested that stigma associated with seeking mental health care may have represented a barrier to some women.

For participants, the intervention's feasibility and acceptability seemed to lie primarily in the opportunity to talk confidentially to a non-judgmental and empathic person about their problems. While the PST model seems to have had an influence on some participants' thinking, this appears to have been a secondary benefit. This is perhaps reflected in the preliminary outcomes, where the gains in problem-solving skills were not significant on three of the five problem-solving styles. However, the intervention materials appeared to have made a significant impression on many of the participants. The booklet seemed to operate as a place to express and process thoughts and feelings, and provide a sense of control over problems. It also seemed to serve as an extension of the therapeutic process and a placeholder for the intervention itself once sessions with the RC had been concluded.

With a view to scaling up, several important lessons were learned from the experience of implementing the intervention, as well as from participant and staff feedback. Developing awareness of mental health matters, including perinatal CMDs and the availability of treatments or resources seems essential. Despite the dissemination of a psycho-education pamphlet coupled with a daily psycho-education talk delivered by the RC to women in the waiting room, the stigma associated with mental health problems may still have been a barrier to intervention access or retention. Including psycho-education materials into the intervention may not be enough to overcome this barrier. Programmes that are aimed specifically at reducing stigma and increasing awareness among perinatal populations may be important contributions to maximising the success of future interventions.

To date, most research has focused on testing the efficacy of task shifting specific interventions or modalities (Petersen et al., 2012). Research on real-world models that can be viably integrated into primary health care services is needed. Scaling up interventions for antenatal psychological distress may incorporate the development of more nuanced models with an appropriate mix of health workforce skills. One such hierarchical model might have the RC overseeing the screening and delivery of a brief intervention by CHWs to women who are mildly to moderately psychologically distressed. This structured, outcomes-based intervention might be delivered in group format, as recommended by some participants in this study. These could also be delivered at women's homes, as other participants suggested. In addition to supervising the CHWs, the RC would be responsible for delivering more complex outcomes-based interventions, such as CBT, to women who have more severe psychological problems and who are in need of more intensive therapeutic intervention. Under the supervision of a psychologist, the RC would act as the link between primary and secondary or tertiary services; responsible for referring to specialist services where necessary.

The data from the study supports the feasibility and acceptability of a task-shifted screening and brief intervention, delivered by a RC, as well as its potential to effect positive outcomes in the treatment of antenatal psychological distress and CMD symptoms. While the absence of a control group and the small sample size make it difficult to extrapolate participant responses to a larger population, in combination with the qualitative data, they do indicate that the intervention may have held benefits for some participants. Furthermore, it is possible that participants might have experienced spontaneous remission of symptoms and that the gains seen in this study simply reflect that.

This chapter investigated the feasibility, acceptability and preliminary responses to an adapted PST intervention to address symptoms of psychological distress. The following chapter is an extension of this study and explores the intervention's feasibility and acceptability from the perspective of key stakeholders.

CHAPTER 6
STAKEHOLDERS' PERCEPTIONS OF THE FEASIBILITY AND ACCEPTABILITY OF SCREENING AND BRIEF INTERVENTION

6.1 Background

Chapter 5 discussed the feasibility, acceptability and preliminary outcomes of a PST intervention from the patients' perspectives. This chapter represents an extension of those findings, by examining the feasibility and acceptability of the same intervention described in the previous chapter, from the perspectives of various stakeholders. A review of the literature pertaining to task shifting interventions was provided in Chapter two and summarised in Chapter 5. This section provides a summary of those South African studies that explored the feasibility and acceptability of their interventions.

Of the nine South African studies reviewed in Chapter 2, three explored the feasibility and acceptability of their interventions. Two of the studies (Myers et al., 2012; Sorsdahl et al., 2015) used screening and brief interventions (one session), primarily focused on outcomes associated with risky substance use, one of which (Sorsdahl et al., 2015) was also concerned with depressive symptoms as a secondary outcome. The third (Petersen, Bhana, & Baillie, 2012a) was a longer group therapy intervention of 12 sessions, aimed at reducing depressive symptoms in adult participants. One was conducted in emergency services using peer counsellors (Myers et al., 2012); another in a primary health care setting using CHWs; while the third (Sorsdahl et al., 2015) was delivered by HIV counsellors to pregnant women attending antenatal care at a MOU.

All three studies listed above found their interventions to be feasible and acceptable from the perspectives of both participants and stakeholders. Concerning stakeholders in particular, staff involved in all three studies felt that the interventions improved the quality of service that they were able to provide. Myers et al. (2012) found that the emergency room personnel did not feel that the intervention interfered with or added to their work. However, they felt the intervention should be made more visible to staff and patients and should be expanded to offer 24-hour support and to address other psychosocial problems. The counsellors experienced varied levels of support and buy-in from staff. A major barrier to the intervention was a lack of space to work privately with participants. In Sorsdahl et al.'s (2015) study, the HIV counsellors found that the intervention materials better equipped them to assist pregnant women in giving up their

substance use. However, MOU staff who were involved in the screening and referral of participants felt that the intervention added to their workloads, representing a potential barrier to the intervention's sustainability. Understanding more about the feasibility and acceptability of task shifting interventions from the perspective of the relevant stakeholders will contribute to the development of sustainable programmes in PHC settings.

As an extension to the study described in the previous chapter, this component of the study sought to explore the feasibility and acceptability of the screening and brief intervention from the perspective of various stakeholders.

6.2 Methods

Qualitative methods were employed to collect data for this component of the study.

6.2.1 Participants

Six role players were identified by the RC and the Acting Head Sister of the MOU as being the most directly or indirectly involved in, or affected by the project. As seen in Table 6.1, they comprised three staff who were most involved in the screening of participants at their first antenatal visits, the primary liaison person and Acting Head of the MOU, the Community Health Centre's Social Worker, and the RC. The staff involved in obtaining patient histories at first intake (and who screened participants for the project) were rotated by the facility to different posts at least every three months. Student nurses were also often used to obtain patient histories and were usually rotated on a monthly basis. Only one of the intake staff, the Health Worker, was consistently in that role. For the purposes of protecting the identities of the stakeholders, the letter 'R' will be used to represent all of them, except for the RC, who will be represented by the letter 'M', and the Social Worker, by the letter 'J'.

Table 6.1 Stakeholders roles in the project

Title/designation	Role in the project
Health Worker	Screening and referral
Senior Nursing Assistant	Screening and referral
Midwife, Nursing Sister	Screening and referral
Midwife, Nursing Sister, Acting Head of MOU	Referral source, primary liaison
Social Worker (J)	Referral source and resource
Registered counsellor (M)	Collected baseline data and delivered PST intervention

6.2.2 Procedures

The RC and Head Sister of the MOU were asked to provide the names of the staff who were most involved and affected by the project. Each role-player was contacted and an appointment was arranged to meet for a face-to-face interview with the researcher. Each role-player provided informed consent (see Appendix IV). The RC was interviewed by a colleague of the researcher's, also a Clinical Psychologist, so as to avoid any conflict of interest (the researcher was the RC's clinical supervisor).

6.2.3 Data collection and analysis

A semi-structured interview schedule (Appendix IV) guided the interviews with the staff members. A separate semi-structured interview (Appendix IV) guided the interview with the RC. All data were audio-recorded and transcribed. The data were then analysed in NVivo 11 using the Framework Method (Pope et al., 2000), as described in Chapter 5.

6.2.4 Training and supervision

Intake nurses at the MOU, who were responsible for administering the EPDS and referring patients to the RC, were instructed in how to incorporate the EPDS into their standard assessment procedures, as well as how to make referrals to the RC. The quarterly rotation of nurses required that the RC regularly provide this training and remind staff of the project's procedures. On two occasions, the researcher also arranged refresher sessions with the intake nurses. On these occasions, with the permission of the patients, the researcher would observe the administration of the screening tool during intake and later provide constructive feedback to the staff member concerned, regarding how this process might be improved. These were also opportunities for the staff to provide feedback to the researcher and ask any questions they might have pertaining to the project.

The RC completed the BPsych degree and was registered with the HPCSA. The majority of her supervised internship training was at the same MOU, where she was one of four interns tasked with delivering counselling services to perinatal women. She was thus well-placed to assume the role of RC for the purposed of this study. Prior to the commencement of the project, the Registered Counsellor attended a three-day training in maternal mental health, delivered by the Perinatal Mental Health Project, which is housed in the University of Cape Town's Alan J.

Flisher Centre for Public Mental Health under the Department of Psychiatry and Mental Health. Furthermore, she received 18 hours of training over three days in the PST model and manual, which included role-playing applications.

Throughout the implementation of the project, the RC received at least one hour of clinical supervision per week from the researcher, a registered Clinical Psychologist. During the first three months of the PST intervention implementation, this was increased to two one-hour sessions per week. During the course of supervision, the RC was required to present new cases, prioritising those that she felt were in most urgent need of attention and those she had queries about. Procedural matters, case management, and fidelity to the therapeutic protocol were central to this process. Random review of recorded sessions did not reveal any protocol drift. In the event of emergencies, the RC received additional telephonic or email support from the researcher.

6.3 Results

Themes that emerged in the analysis of the data generated by interviews with stakeholders were (a) perceptions of utility to patients, (b) filling a gap for staff, (c) perceived challenges and obstacles, and (d) recommendations and suggestions for improvement of the programme.

a) Perceptions of the programme's utility to patients

All six stakeholders, perhaps to varying degrees, felt that the programme was worthwhile and made an important contribution to the services provided at the MOU. Perceptions of the ways in which the programme was helpful seemed to vary according to the role that each staff member played or how their own work was impacted upon by it. As one role-player stated:

> *"I thought - - I still think it's a wonderful tool and it's a wonderful programme to have at any facility. I think research shows you know that women, especially women who are pregnant - - um - - and mental health services – it's not always accessible for women. So to actually come to a facility where somebody actually takes the lead and saying to you 'you know maybe you need to consider counselling, you need to consider to get assistance with whatever you're going through'- - I think that's a wonderful thing - - so I think it's a very positive thing, yes."*

At least two staff members felt that the screening was useful because it improved their capacity to detect psychological problems, as this staff member reported:

"It was really useful. Because you know what happens when they do the screening here…when M was there, and there was that tick sheet - - it was much easier to get the problem, the problem from the patient, unlike you ask the patient 'do you have any problems?' Some of the patients will just say 'no' - - but within that screening tool it was much easier to get that and when they are there you can really see that the patient really had the problem."

All stakeholders agreed that, for the patients, having a counsellor to talk to was the most valuable aspect of the programme. For three stakeholders, having someone that patients could confide in, especially given that the counsellor was a 'stranger' and not a member of patients' families or social networks, was significant. For one role-player, it seemed important that the counsellor was not a permanent member of staff and so might deal with problems differently.

"What worked was - - um - - the patients had somebody else that they could come to and confide in and chat to – just had that personal - - you know on that personal level."

"Yes I feel it does because sometimes the patients don't want to speak to people who knows them outside - - like to neighbours or to family - - but they feel more comfortable to speak to somebody here."

"And having somebody like M was was for some of them a really um um good situation. Because it's not part of the staff - - really she's not part of the staff but it's somebody different that they can go to and chat to and also um her way of dealing."

b) <u>Acceptability: Filling a gap for the staff</u>

For the most part, the staff seemed to feel that the programme lightened their own workloads, as it gave them a resource to refer distressed patients to, instead of having to manage the patient themselves. Three stakeholders described how interactions with distressed patients could be burdensome and stressful for the staff, in that containing the patient took time and energy from their own limited resources, as highlighted in these extracts:

"They just used to come in and start crying! And I'm like 'what now? I haven't said anything, I haven't done anything but you crying!' and now I have to ask 'why are you crying? {Laughs} and then it's like a can of worms."

"And I'm just asking [the patient] 'so why are you smoking such a lot'! …Noooo – but then it end up having - - I end up having to hear about her being abused as a child and her husband is hitting her - - And one question led to - - all of that…Sometimes you just don't ask …Sometimes you just say, 'I just want to get through the day, I'm not going to ask'"

"Like I said because the staff - - staff would speak to clients and then you know - - when people become emotional or they say things that they don't really expect from clients then they don't know what to do with the patient, so then the best thing is 'let me get you to a counsellor or get the social worker to come and speak to you' – that type of thing…there's fifty other clients waiting so I can't really spend an hour or forty-five minutes with one person because - - nobody else is going to see to those clients that needs to be seen."

"It really does drain you. Especially if you look at the counselling skills that I have compared to the counselling skills that M has - - she's trained to do that. The counselling skills that I have is this that we pick up here in there in the perinatal and all that type of stuff - - and it tires you to have to listen to that {Laughs} - - to the problems."

All of the staff talked about the ways in which having a counsellor at the MOU relieved some of the demand that distressed patients represented. Having a professional resource to refer patients to seemed to be the most significant and meaningful contribution that the programme made to the MOU staff.

"Because before then I had to sit for hours and listen to all the stories and then - - um - - but with M here it was ((I'd say)) 'Just come with me' {Laughs} It made my work easier!"

"Yes it gave us the opportunity to refer our high-risk patients - - somebody who - - umm - - you wouldn't normally know where to send them."

"But we knew if we've got a problem, there is M - - we call M - - and she even make an appointment maybe if that day is full for her."

"On the other side, like now if the patient have a problem we have to sit with the patient and it's time - - time consuming. So when M was here all the problems, we used to refer them - - to M, so that was the only impact that the patient - - because with people who has a problem, uh-uh, you can go and look for help somewhere else - - you have to be with the patient, trying to find out exactly so that you can be able to refer where necessary."

"I think how it impacted on my work is that a lot of the clients that was actually screened to be seen by M eventually didn't come to me because if she wasn't there I'm sure that a lot of those cases would have come to me so it impacted on my caseload going down."

This was clear to the RC who experienced the staff's need to have a resource to refer to, as she points out here, recognising that in part, the value of her role was in providing some relief to staff:

"But then again, the sisters in the - - labour ward and in the antenatal clinic - - the HIV counsellors as

well - - I found there was an appreciation, that there was a safety net - - [as if quoting staff] 'I don't always know what to do, I'm going to make this problem that lady's problem' - - so I found that and then again also - - there were cases where you know they just see tears and they're like 'okay don't worry, just sit there in front of that lady's office, she'll see you'"

An additional benefit of the programme was seen in the way it forged connections between existing CHC resources or staff who were not well-connected before. For example, the MOU staff began to make more contact with the CHC's social worker (J), as highlighted in this excerpt:

We were not very much in contact with J until this programme started…Yes…we were not making use of J much before then - - J was also just a name of someone

c) Perceived challenges and obstacles

The stakeholders highlighted several challenges associated with the programme, many of which appeared to be related to an overburdened system. As referrals increased, the RC had less time to immediately see all patients referred to her and in some instances would need to arrange an appointment on another day instead. When asked what she thought was problematic about the programme, one role-player had this to say:

"The amount of patients that was referred…Because - - um - - I don't think M could keep up with all the all the patients - - And uh umm - - then she's - - then she used to say she can't see somebody now, she must get a date or whatever then the staff just stopped referring."

Stakeholders felt that this was a problem and that the programme should have had more capacity as a walk-in service:

"See with pregnant women I found that you must just be available. You mustn't have that situation that 'you not booked for today so I can't see you'. You must be there for them. That is how I- I deal with our pregnant moms. And just to be there whenever ah- ah- they feel comfortable and ready to see you. But if I'm busy with you obviously they can see "hang on" or tomorrow they in the town centre and they feel "Ahhh I can go over and chat", you know we must have an open door - -situation."

"The only thing that really concerned me was - - I felt that the patient had – on that specific day she needs help - - but then M said no she's going to phone them - - but sometimes the patients don't want to come in or - - maybe they need - - that day they need - - that's the only thing that could - -why couldn't they be seen on that specific day."

The role that the programme played in relieving staff seemed to be echoed in this way and perhaps highlighted a sense of inadequacy or anxiety about having the capacity to manage a distressed patient. One role-player alluded to this:

> *"But even those patients really need help so if - - I mean if M - - I mean J is not there on that particular day or maybe….or maybe or if J is fully-booked, so she has to give the other days…and you send the patient home without - - being helped…because you can talk to the patient but you feel that it's not enough, maybe it's not enough. Of course I understand for the patient because there is somebody there that they talk, they going to feel much better but for you that you've been talking to the patient you think, I don't think I gave enough."*

However, one role-player felt that a walk-in service would mean that counselling is treated as a "crisis service". She felt that this would send the wrong message to women about taking care of their mental health:

> *"I don't know how effective that is also um - - because it also creates the wrong perception with the client in terms of intervention and what can be done - - and again in my opinion I think it would be better to say to people you know, mental health is a thing that you should pay attention to continuously and not only when you are in crisis or when there's a problem."*

Every role-player made reference to the overburdened and under-staffed state of the system and the demands placed on staff as a result. Interestingly, while the value of the programme to staff appeared to be in the relief it offered from the demands of distressed patients, feeling overburdened may have, in and of itself, represented a challenge to the acceptability of the programme. With staff rotations and what she perceived as reluctance to complete the EPDS with patients, the RC found that the screening tool was frequently returned to her with scores of zero.

> *"I would get nought, NOUGHT. I mean there's no way that those ladies could get zero on an EPDS, in the circumstances or if you chat to her - - And where I would for example get a high score and then redo the questionnaire, just sit with you a little bit, chat - - you would, you would either get a way different score. Sometimes there instances where one participant was screened twice by two different nurses and scored completely different."*

In this vein, two stakeholders expressed frustration at their colleagues for their unwillingness to participate in projects in general:

> *"Like some staff have - - have the vision of 'I just do my nursing job' and then they won't ask the patient, they let the patient do it."*

> *"I think people work in little squares and they're just concerned about what happens in their little square - - umm - - even though they know that other things might impact, they not really that interested because it's not X's baby so they not going to get too involved."*

For one of the stakeholders, the reticence to participate observed in colleagues, while frustrating, was understandable and explained by staff being overburdened and overworked.

> *"I don't know if it's ignorance or if it's just that people are - - I don't know - - but I know, it also has to do with, you know, the lack of staff and the amount of clients that needs to be seen – so I also understand that perhaps people feel overwhelmed - - and so I don't really want to become too interested in something else because - - even if I want to do that I must still see to the fifty that's waiting for me."*

When asked directly, all the intake nurses denied feeling that completing the EPDS with patients added to their workloads. However, there were some suggestions that they felt it created more work for them to do. This was done by suggesting that other staff members experienced it as adding to their load.

> *"There was a lot of - - we had a lot of forms to fill in actually and writing - - But for me it's fine to just - - while the patient's there to just fill it in - - because we have this other thing that we also do {showing pamphlet} - - called 'Mom Connect' …it also takes time so - - for me it's something part of your job - - you just do it." [Referring to colleagues]: They felt - - um - -filling in the form was extra work for them and they have enough to do.*

One staff member suggested that the reluctance to complete the screening with patients was due to patients' discomfort with the process:

> *"Look from my point of view the woman is pregnant – it's her first time booking, there's lots of emotions going. And I feel um - - by giving her that it's um - - putting her on the spot - - you mustn't put a woman on the spot…Because you asking me this and I didn't expect it [as if quoting a participant]."*

Two of the intake nurses felt that the screening tool should not be administered by the nurses, but that the women should complete the form themselves while they are waiting to be seen. The RC reported feeling that the intake nurses experienced the screening and referral process as burdensome:

> *"Those that were involved - - let's just say the intake nurses found it to be a 'las' (burden) – it's extra work for them, [as if quoting the staff] 'I've got to refer, I've now got to give you updates on my numbers, now you want to give them a sticker' – you know if we didn't have stickers they had to fill in the forms for me by hand so needed dates of birth, surnames, contact details."*

The lack of space at the MOU was another obstacle to the acceptability of the programme. This was frequently cited by at least one role-player, who suggested that the programme be taken to another facility where there is likely to be more space.

> *"I won't say it didn't work - - I would say it's a- it's a good intervention…It's a good intervention to have - -the only thing here is the space thing you understand? And now that we have the new hospital – have you been to the new hospital?…You must go, maybe they have space."*

One role-player felt that the lack of space was sometimes used as a reason to prevent new programmes from being adopted, since new programmes often represent additional work. In this way, physical space may well have represented staff members' capacity – in terms of time and energy – to accommodate the additional duties that programmes often bring with them.

> *"It's difficult because they agree to a lot of things and then when it needs to happen, there's no space available, people don't want to share their space."*

The stakeholders reported feeling that they had enough information about the programme itself, but three of them said that they would have liked direct feedback about specific patients that were referred to the RC. As highlighted in these excerpts:

> *"I would like to know where the patient is going from - - from M where? What's being done for them."*

> *"More the outcomes 'cause I mean it's one thing to refer a person but you would want to know what happened to that person afterwards – did you prevent anything bad happening? Or something like that."*

In some ways, the staff's experience of being overburdened and under-resourced was echoed in the challenges that the RC experienced. Despite weekly supervision sessions, the RC reported finding it challenging to manage the demands of her substantial and difficult caseload.

> *"I was one person and I had too many cases to - - it was a case overload and a lack of supervision - - so I had my weekly sessions or - - we really tried for - - we had so much to discuss that we didn't get to everything – and - - what we didn't get to was the crux - - and I think I got to a point where - - I really - - there's no other word, I was burnt out."*

Supervision was inadequate to relieve her of the burden of her role in relieving the distress of patients, as well as relieving staff from the demand of distressed patients. In this sense, her own need for support beyond what supervision could provide was great and her own resources, limited.

d) Recommendations and suggestions for future programmes

Despite what appeared to be ambivalence about the programme from some staff, all stakeholders felt that having a counsellor at the MOU was essential. Stakeholders felt that they needed someone who would attend specifically to the mental health care of patients, worrying that in the meantime, since the programme has terminated, that staff might not detect psychological problems in their patients:

> *"We need our own counsellor. We are not - - We are not picking up depression, we are not picking up postnatal depression because we're not looking for it. As it is now there is a lot of people slipping through our hands that need help…And we are [only] focusing - - mommy, stomach, baby - - we not focusing mental health.*

"In fact, in spite of the concern about space, one solution to ensure that all patients are seen on the day that they are referred was to have more counsellors available so that a walk-in service is made possible. Ensuring that patients were seen by the counsellor on the same day that they were referred was another recommendation from several stakeholders.

> *"See with pregnant women I found that you must just be available. You mustn't have that situation that 'you not booked for today so I can't see you.'"*

Three stakeholders felt that increasing both patient and staff awareness of mental health, counselling services, and the benefits of counselling would improve the service and retention rates.

> *"I think that if we can get to a point where we actually get people to understand that there's more to wellness than just physical health um - - we would have done a lot - - maybe we can do a lot better then."*

> *"But I would say I would really try to work more on the awareness side of things, um you know to really - - for a while to run awareness programmes and to educate um - - about these things."*

Two stakeholders felt that stigma associated with mental illness needed to be addressed in order to improve the programme. One suggested that women are given appointment times in the afternoon, when the MOU is less busy so that other patients would not see her going to see the counsellor. Both felt that the being seen by other patients to use the service made the women feel self-conscious and therefore less inclined to take up the counselling service when it was offered to them:

> *"Maybe they don't want to be seen - - I think - - when people don't want to be seen - - maybe they thought this one knows me and they know I'm coming for this and I'm coming for that - - see them in a certain time or maybe give them appointments to come."*

> *"And this was thirty to fifty women. And then you have the new bookings. So their first - - it's their first time coming to the clinic to book for this pregnancy - - not necessarily their first time being pregnant - - but they - - it was a long day, and they were always kept together so you, you - - if one lady has been screened and they come and call her, whether it's in the waiting room, whether it's at the HIV clinic, they're always together, so they kind of knew, 'this lady's going to see that lady now and that' - - that in the beginning was difficult for them 'no, no, no I'm fine, I'm fine'"*

These stakeholders also felt that the screening tool should be completed by the women themselves and that the intake nurses should not be involved in its administration. One role-player felt that the women would answer the questions more honestly if they were left to complete it on their own.

> *"Yes - - [as if quoting a participant] 'am I going to be truthful about it? Unlike when you give it to me I have time to read through it - - okay this is what you want you going to give me support, I'll fill it in more honestly.'"*

The same role-player felt that not all staff were equipped to administer a mental health screening in that they were not empathic enough, a sentiment that was shared by the RC.

> *"I won't way it's too much - - everybody's not geared…Empathetic - -Yes they're not empathetic about it."*

6.4 Discussion

Several key insights emerged from interviews with stakeholders. First, the benefit of having a person for patients to talk to was one that was echoed by the stakeholders who felt this to be the intervention's most valuable contribution to patients. By extension, for the stakeholders, having a professional resource to refer to seemed to relieve them of the pressures of managing distressed patients during the course of routine care. This relief seemed to underscore the overburdened state of this MOU, highlighting the need for counselling services in these settings. Mental health problems appeared to add to the burden of care experienced by MOU staff who reported not having the time, capacity or skills to manage psychologically distressed patients. In this respect, the intervention was widely deemed to be acceptable and feasible by stakeholders. While none of the stakeholders reported that the screening and referral procedures

added to their workload, there were indications that staff experienced it as such. In this way, the screening was perhaps less acceptable to staff than having a counsellor available on site to refer to. However, there was a sense among some stakeholders that the unit's capacity to detect psychological problems was compromised without mental health screening.

Second, heavy caseloads and limited resources are likely to be at the heart of stakeholders' emphasis on the need for a walk-in counselling service. Having a professional resource to immediately refer to clearly relieved healthcare workers of the burden of distressed patients' psychological or emotional care. At the onset of the programme, the RC was able to see most referrals on the same day that they were referred. As her own caseload increased, this became less feasible. Every effort was made to triage referrals so that those patients most in need (for example, patients at risk for suicide) were immediately seen by the RC. If time constraints were a factor, appointments were made with those women who were assessed as being low risk. Given that the RC was only employed to work half-day for four days a week, a fully walk-in service was not practicable or achievable in this context. Similar programmes in the future might consider structuring the counsellor's day so that half is made available for walk-in patients, and the other half for those with follow-up appointments.

Third, the stability and sustainability of the project for its duration is thought to have been achieved in two related ways: using a trained and degree-qualified Registered Counsellor to drive and deliver the intervention; as well as integrating the programme into the MOU system. The multiple demands and aspects of the project were managed by the RC, as they might have been in a real-world context. Using skills that her training afforded her, the RC was able to successfully nest the project within the MOU, network with stakeholders, provide psycho-education, manage referrals from screening and other sources, detect more complex psychiatric conditions, triage at-risk patients, refer patients to other resources or services (including tertiary mental health services), in addition to delivering the counselling intervention. It is highly unlikely that a lay counsellor or CHW would have the skills to deliver a similarly integrated and complex service.

Some of the obstacles encountered in the implementation of the project may have been mitigated had the staff experienced a greater sense of ownership of the project. Attending staff meetings, providing general feedback and meeting with stakeholders did not achieve this as much as we had hoped. However, it is possible that providing patient-specific feedback to referral sources may have facilitated an increased project ownership among staff. Limited time

and resources made this difficult to carry out in this programme, but stakeholders who were interviewed frequently expressed curiosity and concern about particular patients that they had referred to the RC. Knowing that their referrals had an outcome that benefited their patients may have made them feel more involved and responsible for the project's success. Developing and incorporating an appropriate feedback system would be an important component to consider including in the scaled up intervention.

CHAPTER 7

CONCLUSION

7.1 Introduction

The preceding four chapters (Chapters 3 to 6) sought to answer the research questions that were posed in the introductory chapter of this thesis. The purpose of this chapter is to provide an integrated summation of the findings from these four chapters, collating the results and exploring the relationships that exist between them. This will be done in two steps: first, by presenting the findings from each chapter that answer the research questions; and second, by synthesising the implications of these findings for practice, training and policy.

7.2 Answering the research questions

The findings that address each of the three research questions that were formulated in the introduction will be discussed here in brief.

Research question #1

What is the prevalence rate of psychological distress during pregnancy among women who receive antenatal care at primary health care centres, and what are the associated risk factors?

Chapter 3 of this thesis sought to answer this question. In the last two decades, several studies have investigated the prevalence rates and predictors of postnatal CMDs, primarily depression. Recently, researchers have increasingly focused on antenatal CMDs, also largely on depression. In South Africa, prevalence rates of symptoms associated with CMDs range between 21%, as measured with a screening instrument (Brittain et al., 2015), to 47% in rural areas, as measured by a diagnostic tool (Rochat et al., 2011). Very few have sought to investigate broader, dimensional definitions of mental health problems during this period. Using a range of methods, all samples were drawn from localised sites, such that results are difficult to generalise to broader populations. The findings from this study contribute to closing that gap by reporting on the prevalence of general *psychological distress*, along with the

associated risk and protective factors, among pregnant women who presented for antenatal care at all 11 MOUs in the Western Cape.

Of the 664 women who completed the study's survey, 38.6% were found to be psychologically distressed, as measured by the SRQ-20. Factors associated with increased risk for antenatal psychological distress were found to include low SES; being the victim of physical abuse and/or rape in the previous three months; having given birth; and, complications during a previous delivery when compared to women pregnant for the first time. Protective factors included increasing age; having a high school education; having a partner who is supportive of the pregnancy; not having a partner at all compared to having an unsupportive partner; higher overall social support; being in the second semester of pregnancy compared to the first; and substance use, particularly alcohol and other drug use.

Research question #2

What perceptions do pregnant women have of mental illness during the perinatal period, including their beliefs about causes and views on the most effective treatments?

Chapter 4 of this thesis addressed this question. The limited data available concerning MHL among pregnant women comes from HI contexts and has shown that pregnant women often have difficulty differentiating CMD symptoms from the experience of being pregnant (Bilszta et al., 2010; Henshaw et al., 2013; Highet et al., 2011; Hübner-Liebermann et al., 2012). South African studies of MHL are also limited and none have focused on women in the perinatal period. This is the first South African study to explore the perceptions that pregnant women have of perinatal mental illness. 263 pregnant women completed a questionnaire after having been presented with one of five possible vignettes, portraying disorders including: panic disorder, substance abuse, schizophrenia, as well as ante- and postnatal depression.

The results from this study showed that more than three quarters of respondents (77.4%) did not identify the signs and symptoms described in the vignettes as characteristic of mental illness. More than half of all participants (57.5%) were of the view that all the disorders depicted were "typical of a weak character", while stress was the most widely held explanation for symptoms of all disorders. Significantly, compared to postnatal depression, *antenatal* depression was perceived by more respondents to be a "normal response". Almost two thirds of respondents considered the antenatal and postnatal symptoms of depression to be "typical

of a weak character". Where treatment was concerned, participants were most confident in the therapeutic potential of psychological services, especially consulting with a counsellor or social worker. These were closely followed by lifestyle and self-help options as the most endorsed means to addressing psychiatric symptoms during pregnancy. Notably, seeking help from a spiritual or religious advisor was comparably as popular among participants as seeking help from a psychologist or social worker.

Research question #3

Is a modified PST intervention to reduce symptoms of psychological distress among women presenting for antenatal care in primary health care settings, delivered by a Registered Counsellor, feasible and acceptable; and, what are the preliminary mental health outcomes of said intervention?

Chapters 5 and 6 answered the third and final research question. To date there has been good evidence to support task shifting approaches to integrating mental health services into primary care in South African settings (Spedding et al., 2015). However, nearly all interventions have made use of lay counsellors or CHWs to deliver interventions. As yet, no studies have investigated the utility of the RC professional category to deliver services in PHC settings. PST has been shown be an effective intervention for reducing psychological distress and depression (Sorsdahl et al., 2014; van't Hof et al., 2011), however, to the best of our knowledge there have been no studies examining the feasibility or effectiveness of PST for reducing depression in the perinatal period.

Chapter 5 focused on the 22 intervention participants who completed the pre- and post-intervention interviews, by investigating their preliminary responses to the three-session PST intervention, in addition to exploring their perceptions of the intervention's feasibility and acceptability. Preliminary responses to the primary outcomes saw significant reductions in CMD symptoms, as measured by the EPDS, as well as symptoms of psychological distress, as seen in the SRQ-20 scores. Corresponding reductions in impaired functioning in the dimensions of work, social life, and family responsibilities were also noted. Where problem solving skills were concerned, 'negative problem orientation' and 'avoidant style' of problem solving were significantly reduced. Participants largely felt that the intervention was feasible and acceptable. At the heart of its acceptability was the opportunity to talk confidentially to a non-judgmental and empathic person about their problems. The intervention materials also

made a significant impression on many of the participants, with the booklet serving as an extension of the therapeutic process and a placeholder for the intervention itself. Factors that were identified by participants as representing potential barriers to the intervention included lack of transport or money, work commitments and stigma.

Chapter 6 was concerned with the intervention's feasibility and acceptability from the perspectives of 6 key stakeholders who had varying degrees of involvement with the project. The stakeholders felt that the intervention was helpful to patients and a valuable resource for the facility to have. Some expressed concern about how stigma associated with mental illness might be a barrier to patients who need mental health care. To the staff, the project's value seemed to lie primarily in the support it provided in managing emotionally distressed patients. Having a resource to refer patients to appeared to provide overburdened staff with some relief. None of the stakeholders reported that the screening and referral procedures added to their workload, although there were some indications that it might have. Some stakeholders felt detection of psychological problems among patients was compromised without mental health screening. Staff felt that a walk-in counselling service would serve to improve future interventions.

7.3 Potential implications of study results

This section will consider the potential implications that the study's results have for policy, practice and training.

7.3.1 Implications for policy

Where policy is concerned, mental health services that are integrated into primary health care services such as maternal and reproductive health have long been advocated (Petersen et al., 2012). As highlighted in Chapter 2, the wide range of adverse effects associated with untreated perinatal mental illness for the woman, the infant, and the family have been well-documented (Paschetta et al., 2014; Stein et al., 2014; Diego et al., 2008; Grigoriadis et al., 2013; Vythilingum, 2011), warranting such integrated care. The results from Chapter 3 indicate that perinatal mental illness is highly prevalent, highlighting the extent of the need for integrated mental health services in public perinatal care facilities. Recommendations for policy are divided into three sections: mental health screening during pregnancy, integrated interventions, and building human resource capacity.

Mental health screening during pregnancy

The Department of Health's (2013) recognition of the need for mental health care that is integrated into perinatal care is reflected in the National Mental Health Policy Framework and Strategic Plan 2013-2020 (MHPF), which endorses routine screening of perinatal mental illness. Based on the results of this study, one recommendation would be to ensure that *pregnancy* is the focus of screening efforts, for several reasons. First, as was shown in Chapter 3, psychological distress during this period is highly prevalent. Second, since antenatal CMDs are the strongest predictors of postnatal CMDs (Edwards et al., 2008; Leigh & Milgrom, 2008; Milgrom et al., 2008) screening during pregnancy means that early recognition and intervention is made possible, potentially mitigating the effects of perinatal CMDs. Third, the low rates of recognition among both healthcare providers (Goodman & Tyer-Viola, 2010) and pregnant women themselves support the need for antenatal screening. The findings from Chapter 4 support this, where significantly more women considered depression during pregnancy to be "normal" compared to postnatal depression. It would appear that among pregnant women especially, the ability to identify symptoms of CMDs might be compromised by the physiological and emotional experiences associated with pregnancy[12]. Given the findings from Chapter 6, in order to increase the feasibility and acceptability of integrated screening, it may be worthwhile considering self-screening or shorter screening methods.

Integrated interventions

Without the means to intervene, antenatal mental health screening is, at best, futile; at worst, unethical. Interventions to address antenatal psychological distress and CMDs need to be developed at several levels. At the first level, based on Chapter 4's findings, socio-culturally appropriate psycho-education programmes that specifically target pregnant women are needed (Freed et al., 2012; Kakuma et al., 2010). This is in line with the MHPF's objective of increasing public awareness of mental health issues. There are several benefits to providing psycho-education to women during pregnancy. For one, the benefits of mental health literacy include reduced stigma (Kitchener & Jorm, 2005), which is a barrier to help-seeking and

[12] This assertion is supported by Fisher et al.'s (2012) findings, where prevalence rates during pregnancy were found to be lower on self-report measures (13.43%) compared to diagnostic measures (21.8%). The reverse was true for postnatal studies, where diagnostic tools yielded lower prevalence rates (16.1%) than self-report measures (20.8%), as would be expected given the sensitivity of diagnostic tools. These findings seem to support the idea that pregnant women are more likely to underestimate CMD symptoms during pregnancy, mistaking them instead for typical pregnancy experiences.

treatment retention (Jorm et al., 2006). For another, on its own, psycho-education has been found to contribute to the prevention of CMDs (Fisher, Wynter, & Rowe, 2010). However, psycho-education programmes should not be limited to patients. Programmes designed for midwives and other antenatal care staff should also be implemented (Dirwayi, 2002; Goodman & Tyer-Viola, 2010). While the mental health literacy of staff was not assessed, the findings from Chapter 6 seem to support this, where stakeholders in the intervention felt that without screening their capacity to detect mental health problems was compromised. The psycho-education of partners and family members may also increase the likelihood of detection, self-referral for treatment and retention to treatment among distressed women. Since unsupportive partners and poor social networks have been shown in this study and elsewhere (Kathree, Selohilwe, Bhana, & Petersen, 2014a; Tomlinson et al., 2004) to increase women's risk for mental health problems, creating awareness of the need for support may be important.

At the second level, incorporating brief evidence-based interventions to treat psychological distress is recommended. Findings from Chapters 5 and 6 support the feasibility and acceptability of integrating a screening and brief evidence-based intervention into antenatal care. This in keeping with the findings of other studies (Chibanda et al., 2011b; Myers et al., 2012; Sorsdahl et al., 2014). For pregnant women, having a non-judgmental, empathic person who is not related to them, listen to their problems was an important benefit, while the intervention materials also made a significant impression on participants. While there were some indications that including a screening measure into routine history-taking might add to staff workload, it seemed very clear that this might be offset by the relief that having a professional counselling resource to refer to would offer overburdened staff in the management of psychologically distressed patients. This is an important finding as it suggests that having to cope with psychologically distressed patients during the course of delivering routine care may well be adding to the burden that staff experience. Interventions for patients may thus not simply provide symptom-relief to patients, but relief from the burden of additional stress to staff.

Building human resource capacity

As noted in the introductory chapter, existing mental health resources and structures are inadequate to achieve the MHPF's objectives regarding mental health care. Severely limited resources are a barrier to the delivery of services that are integrated into antenatal primary health care (Petersen & Lund, 2011). Task shifting has been shown to be a viable means to

achieve this (Spedding et al., 2015) and is endorsed by the MHPF. To date, the findings from all South African research on task shifting have reported that using lay counsellors or NSHWs such as CHWs, peer counsellors or nursing staff is an effective approach to delivering mental health treatments (Spedding et al., 2015). However, relying on NSHWs to detect, manage and treat psychological distress or CMDs in real-world settings is highly problematic for several reasons. First, research has shown that even medically trained nursing staff in primary health care settings are often unable to recognise symptoms of mental illness (Dirwayi, 2002; Goodman & Tyer-Viola, 2010). Second, as was shown in Chapter 6, primary health care staff are already overburdened, such that the inclusion of the 10-point EPDS screening measure in this study was felt by some staff to add to their workload. Given the overburdened primary health care system, and based on responses to this project, task shifting interventions to midwives or nursing staff is likely to be neither feasible nor acceptable to the staff. Third, supervision is likely to be severely limited in real-world contexts, potentially leading to intervention protocol drift and unsupported staff. Together, far from remediating the treatment gap, these factors are likely to lead to highly compromised quality of care.

Developing service models with cadres of workers such as Registered Counsellors must be given serious consideration (Petersen, Lund, Bhana, & Flisher, 2012b). One such model might have NSHWs trained and supervised by RCs to deliver primary level interventions, for example, during home visits. NHSWs who encounter patients requiring further assessment would refer those patients to the RC. The RC could then determine what resource might best meet the patient's needs. The RCs are in turn supervised by Clinical Psychologists or other specialists. Should advanced care be indicated, the RC would then refer patients to the appropriate specialists. As discussed in Chapter 2, RCs are trained to identify, case manage, and deliver counselling interventions. Not only does their training make them more likely to be able to manage the challenges associated with an overburdened system, but they are ideally suited to overseeing and supervising NSHWs in the delivery of primary prevention interventions (Bhana, Petersen, Baillie, Flisher, & The Mhapp Research Programme Consortium, 2010b; Pillay et al., 2013). To date, while posts have been created for RCs in other government departments such as Correctional Services, there are no such posts for RCs in public health, where they are arguably most needed. Increasing human resources by creating posts for RCs so as to develop models that are more in line with a collaborative care model, may be the most feasible way to relieve the system, deliver equitable mental health care and achieve the MHPF's objectives (Lund, Kleintjes, et al., 2010b; Skeen et al., 2010).

7.3.2 Implications for practice

The results of the three studies have several implications for current practice in antenatal mental health. First, staff involved in antenatal care should be made aware of the high prevalence of psychological distress during pregnancy and of the risk and protective factors associated with antenatal CMDs (Chapter 3). Intake nurses who collect patients' histories should be alerted to risk factors such as complications during a previous pregnancy, lack of support from an intimate partner, young age, poor social support, and a history of having suffered physical violence and/or rape (Brittain et al., 2015; Hatton et al., 2007). In the absence of a screening measure, this might be useful means to assessing for psychological distress.

Second, given Chapter 4's findings that religious and spiritual leaders were highly rated as promising sources of help, it is possible that women will seek help from those sources (Sorsdahl et al., 2009). Developing a network between various community resources such spiritual and religious leaders, and including NGOs, government agencies, rehabilitation centres, social services, shelters and other resources that might be able to provide appropriate supplementary support or assistance, is important. Having access to resources to refer distressed patients to may provide important relief to both patients and staff (Chapter 6). Collating this list of resources and their contact details and making it available to women may be of great benefit to those who need support.

Third, using the waiting period to deliver brief psycho-education talks may help to increase MHL and reduce stigma associated with mental illness. Screening short psycho-education films might also be useful approach to delivering information. Women who attend antenatal appointments often have to wait for several hours in between various aspects of their antenatal care, including history-taking, physical examinations, providing urine samples and having blood tested. Furthermore, delivering such information using less orthodox psychiatric terms may also be important (Atilola, 2015b). In keeping with other South African studies (Hugo et al., 2003; Sorsdahl & Stein, 2010b). The results from Chapter 4 show that pregnant women tend to primarily ascribe symptoms of perinatal mental illness to 'stress'. In fact, when asked to provide a diagnosis, the term 'stress' was also favoured as a label. Using this term to describe CMDs instead of orthodox psychiatric labels is likely to make psycho-medical information less threatening and more relatable. In turn, this may have an impact on reducing the stigma associated with mental illness and facilitate improved help-seeking behaviours.

Fourth, encouraging the development of social support networks is also important (Chapter 3 and Chapter 5). Since studies have shown that women are more likely to turn to informal support structures first (Henshaw et al., 2013), facilitating the development of networks among women who are having similar experiences might be helpful. This might be done in several ways. For example, encouraging women to involve their partners or another family member in the antenatal care process, including attending appointments whenever possible. The long waiting period might also be used to encourage interactions among the women themselves and facilitate the development of new connections. Women are typically seated next to the same fellow patient for the duration of the visit. Providing women with a social exercise, game or light activity that involves asking each other questions might be one way to do this.

7.3.3 Implications for training

There are several important considerations regarding training that arise from this study. First, based on findings described in each of the main chapters, providing some mental health training to staff involved in antenatal primary care would significantly contribute to improved care at this level. Content should include information about symptoms of CMDs, causes of CMDs, risk and protective factors, and available treatment and support, which would enable staff to deliver psycho-education to patients (Chapter 4). This kind of training might also be extended to other community stakeholders, such as spiritual or religious leaders, where distressed women may seek help (Chapter 4).

Second, it may be of value to develop and make use of a standardised basic counselling skills course that every NSHW is required to complete. Basic skills such as active listening, reflecting, and even aspects of motivational interviewing might form part of the content. In this way and in keeping with the IOM's (2013) recommendations, the command of certain skill-sets can be assumed. This standardised package could be extended to staff at antenatal care facilities, so that they are better equipped to manage distressed patients if needs be (Chapter 6). It may also be of value to invite community stakeholders to participate in such training, thereby expanding the network of available support.

Third, to date, all South African task shifting research has made use of NSHWs to deliver interventions (Spedding et al., 2015). If task shifting interventions using NSHWs are to be viably and effectively introduced into primary health care, developing appropriate mechanisms for supervision and training of NSHWs is imperative. However, to the best of our knowledge,

none of the professional training courses in applied psychology, including Clinical Psychology, include modules about the provision of supervision. In general, specialists learn about how to provide professional supervision from their own experience of being supervised. While these experiences are instructive, training and supervising NSHWs to deliver interventions is likely to be more complex and require more rigorous mechanisms of monitoring, evaluation and people-management skills (Daniels, Nor, Jackson, Ekström, & Doherty, 2010; Pillay et al., 2013). Training specialists in models of supervision that are appropriate for overseeing the work of NHSWs, such as the apprenticeship model (Murray et al., 2011), is highly recommended.

7.4 Future research

With a view to future research, there are several areas of inquiry that would help us to understand more about the delivery of mental health care to pregnant women.

Chapter 3's findings contributed to the growing body of data regarding the prevalence of antenatal mental illness by providing data that employed a more dimensional definition of CMDs in the form of psychological distress. While the population was sampled from all 11 MOUs in the Western Cape, data were not collected from other provinces making it difficult to generalise results to the South African population. Furthermore, using a diagnostic instrument might have yielded different results to the screening instrument used in this study, which relies on self-report. Future investigations might consider using a non-perinatal control group, as well as screening data from a group of middle-to-high-income perinatal women. This might provide valuable information about the ways in which limited access to mental health care might influence the substantive experience of perinatal mental distress.

Chapter 4 described the first study to investigate the MHL of pregnant women in South Africa. The data suggests that a substantial proportion of pregnant women do not associate the symptoms described in the vignettes as consistent with mental illness. Furthermore, the most commonly held attribution for symptoms was stress. Limitations to the study were seen in the use of convenience sampling from one MOU, such that the results may not be generalisable to all South African women in the perinatal period. Second, the limited qualitative data restricts our ability to develop more nuanced understandings of how mental disorders are perceived by women during the perinatal period. Third, the absence of standardised vignettes, while useful for eliciting target-specific data, means that these findings are not easily comparable to other

studies. Future research might consider collecting data from samples at different sites. Assessing the MHL of primary health care staff at antenatal facilities would also provide invaluable data about how midwives and other nursing staff perceive perinatal mental illness. Testing psycho-education programmes designed for perinatal populations is another area that is likely to yield important data.

Chapters 5 and 6 described the feasibility and acceptability of a three session PST intervention, as well as participants' preliminary responses to it. The intervention showed reductions in psychological distress, increased functioning and improved problem-solving skills. It was deemed by both participants and stakeholders to be largely feasible and acceptable. The study was limited by a small sample size, making it difficult to extrapolate results more broadly. Furthermore, without a control group, it is not possible to know whether the changes observed were as a result of the intervention or other extraneous factors. Future research might consider scaling up to employ a RCT design to measure the efficacy of such an intervention to treat antenatal CMDs. Additionally, while the intervention was accommodated within the MOU, the RCs access to weekly supervision from the researcher, as well as funding to develop and provide materials are not accurate representations of how a real-world model might operate. Essential to the area of task shifting is the development and testing of a viable real-world model that is comprised of an appropriate workforce skill mix, as described in the section above pertaining to policy.

In keeping with the IOM's recommendations for candidate core competencies, additional future research might attend to the delineation of human resource categories in primary care settings and the duties or tasks that can be expected of each cadre of worker. Developing a consensus regarding characteristics, skill-sets, and levels of education for each category of NSHW might be useful in the conceptualisation of interventions and the competencies required of providers (Kohrt et al., 2015). By extension, more research is required on the appropriate approaches to supervision in task-shifted models of care.

Mechanisms for ensuring that retention rates are maximised in task shifting interventions is another area that could benefit from academic attention. These might include comparing retention rates between interventions that employ screening tools for recruitment and those that rely on self-referral. Examining the utility and effectiveness of providing an initial motivational interviewing session has been found to increase retention rates among antenatal samples (Sampson et al., 2016), and may be worth investigating in South African settings. Also, given

that lack of transport or money to access transport was a frequently cited barrier (Chapter 5), investigating the cost-effectiveness (and impact) of providing transport costs to patients might also provide important data.

Finally, the need to develop equitable and accessible mental health services in South Africa, a country with profound socio-economic disparities, is undeniable. The burgeoning body of research in the area of task shifting has contributed to informing the development of a national Mental Health Policy Framework that is consistent with the WHO's policy recommendations, and that promises to provide invaluable legislative support for innovative approaches to making services more accessible. However, real-world models that make carefully considered provision for supervision and support need to be investigated. Task shifting to unqualified, unsupervised and unregulated, workers is potentially problematic. The idea that any services are better than no services is one that threatens to undermine efforts to establish more egalitarian access to quality mental health care. The employment of Registered Counsellors in primary health care settings is a viable answer to this problem.

References

Abas, M., Bowers, T., Manda, E., Cooper, S., Machando, D., Verhey, R., … Chibanda, D. (2016). "Opening up the mind": problem-solving therapy delivered by female lay health workers to improve access to evidence-based care for depression and other common mental disorders through the Friendship Bench Project in Zimbabwe. *International Journal of Mental Health Systems*, *10*, 39. https://doi.org/10.1186/s13033-016-0071-9

Abel, E., & Louw, J. (2009). Registered counsellors and professional work in South African psychology. *South African Journal of Psychology*, *39*(1), 99–108. Retrieved from http://www.sabinet.co.za/abstracts/sapsyc/sapsyc_v39_n1_a9.html

Abrahams, N., Mathews, S., Martin, L. J., Lombard, C., & Jewkes, R. (2013). Intimate partner femicide in South Africa in 1999 and 2009. *PLoS Medicine*, *10*(4), e1001412. https://doi.org/10.1371/journal.pmed.1001412

Abrams, L. S., & Curran, L. (2009). "And you're telling me not to stress?" A grounded theory study of postpartum depression symptoms among low-income mothers. *Psychology of Women Quarterly*, *33*(3), 351–362. https://doi.org/10.1111/j.1471-6402.2009.01506.x

Akena, D., Joska, J., Obuku, E. a, Amos, T., Musisi, S., & Stein, D. J. (2012). Comparing the accuracy of brief versus long depression screening instruments which have been validated in low and middle income countries; a systematic review. *BMC Psychiatry*, *12*(1), 187. https://doi.org/10.1186/1471-244X-12-187

Almond, P. (2009). Postnatal depression: A global public health perspective. *Perspectives in Public Health*, *129*(5), 221–227. https://doi.org/10.1177/1757913909343882

American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders*. *Arlington* (5th ed.). Washington DC: American Psychiatric Assocation. https://doi.org/10.1176/appi.books.9780890425596.744053

Anderson, C. M., Robins, C. S., Greeno, C. G., Cahalane, H., Copeland, V. C., & Andrews, R. M. (2006). Why lower income mothers do not engage with the formal mental health care system: perceived barriers to care. *Qualitative Health Research*, *16*(7), 926–43. https://doi.org/10.1177/1049732306289224

Atilola, O. (2015a). Level of community mental health literacy in sub-Saharan Africa: Current studies are limited in number, scope, spread, and cognizance of cultural nuances. *Nordic Journal of Psychiatry*, *69*(2), 93–101.

Atilola, O. (2015b). Mental health service utilization in sub-Saharan Africa: is public mental health literacy the problem? Setting the perspectives right. *Global Health Promotion*, *23*(March 2014), 30–38. https://doi.org/10.1177/1757975914567179

Banti, S., Mauri, M., Oppo, A., Borri, C., Rambelli, C., Ramacciotti, D., … Cassano, G. B. (2011). From the third month of pregnancy to 1 year postpartum. Prevalence, incidence, recurrence, and new onset of depression. Results from the Perinatal Depression-Research & Screening Unit study. *Comprehensive Psychiatry*, *52*(4), 343–351. https://doi.org/10.1016/j.comppsych.2010.08.003

Battle, C. L., & Zlotnick, C. (2005). Prevention of Postpartum Depression. *Psychiatric Annals*, *25*(7), 590–599.

Baumgartner, J. N., Parcesepe, A., Mekuria, Y. G., Abitew, D. B., Gebeyehu, W., Okello, F., & Shattuck, D. (2014). Maternal mental health in Amhara region, Ethiopia: a cross-sectional survey. *Global Health, Science and Practice*, *2*(4), 482–6. https://doi.org/10.9745/GHSP-D-14-00119

Bell, A. C., & D'Zurilla, T. J. (2009). The influence of social problem-solving ability on the relationship between daily stress and adjustment. *Cognitive Therapy and Research*, *33*(5), 439–448. https://doi.org/10.1007/s10608-009-9256-8

Benatar, S. (2013). The challenges of health disparities in South Africa. *South African Medical Journal*, *103*(3), 154–155. https://doi.org/doi:10.7196/SAMJ.6622

Bennett, H. a, Einarson, A., Taddio, A., Koren, G., & Einarson, T. R. (2004). Prevalence of depression during pregnancy: systematic review. *Obstetrics and Gynecology*, *103*(4), 698–709. https://doi.org/10.1097/01.AOG.0000116689.75396.5f

Bergner, S., Monk, C., & Werner, E. A. (2008). Dyadic intervention during pregnancy? Treating pregnant women and possibly reaching the future baby. *Infant Mental Health Journal*, *29*(5), 399–419. https://doi.org/10.1002/imhj.

Bernstein, D. P., Fink, L., Handelsman, L., & Foote, J. (1994). Initial reliability and validity of a new retrospective measure of child abuse and neglect. *American Journal of Psychiatry*, *151*(8), 1132–1136.

Bhana, A., Petersen, I., Baillie, K. L., Flisher, A. J., & The Mhapp Research Programme Consortium. (2010a). Implementing the World Health Report 2001 recommendations for integrating mental health into primary health care: a situation analysis of three African countries: Ghana, South Africa and Uganda. *International Review of Psychiatry (Abingdon, England)*, *22*(6), 599–610. https://doi.org/10.3109/09540261.2010.536152

Bhana, A., Petersen, I., Baillie, K. L., Flisher, A. J., & The Mhapp Research Programme Consortium. (2010b). Implementing the World Health Report 2001 recommendations for integrating mental health into primary health care: a situation analysis of three African countries: Ghana, South Africa and Uganda. *International Review of Psychiatry (Abingdon, England)*, *22*(December), 599–610. https://doi.org/10.3109/09540261.2010.536152

Biaggi, A., Conroy, S., Pawlby, S., & Pariante, C. M. (2016). Identifying the women at risk of antenatal anxiety and depression: A systematic review. *Journal of Affective Disorders*, *191*, 62–77. https://doi.org/10.1016/j.jad.2015.11.014

Bilszta, J., Ericksen, J., Buist, a, & Milgrom, J. (2010). Women's experience of postnatal depression -- beliefs and attitudes as barriers to care. *Australian Journal of Advanced Nursing*, *27*(3), 44–54. Retrieved from http://ezproxy.lib.ucalgary.ca:2048/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2010637442&site=ehost-live

Biratu, A., & Haile, D. (2015). Prevalence of antenatal depression and associated factors among pregnant women in Addis Ababa, Ethiopia: a cross-sectional study. *Reproductive Health*, *12*(1), 99. https://doi.org/10.1186/s12978-015-0092-x

Blegen, N., Hummelvoll, J., & Severinsson, E. (2010). Mothers with mental health problems: a systematic review. *Nursing and Health Sciences*, *12*, 519–528. https://doi.org/10.1111/j.1442-2018.2010.00550.x

Boath, E., Bradley, E., & Henshaw, C. (2005). The prevention of postnatal depression: A narrative systematic review. *Journal of Psychosomatic Obstetrics & Gynecology*, *26*(3), 185–192. https://doi.org/10.1080/01674820400028431

Brittain, K., Myer, L., Koen, N., Koopowitz, S., Donald, K. A., Barnett, W., … Stein, D. J. (2015). Risk factors for antenatal depression and associations with infant birth outcomes: Results from a south african birth cohort study. *Paediatric and Perinatal Epidemiology*, *29*(6), 504–514. https://doi.org/10.1111/ppe.12216

Bruwer, B., Sorsdahl, K., Harrison, J., Stein, D. J., Williams, D., & Seedat, S. (2011). Barriers to mental health care and predictors of treatment dropout in the South African Stress and Health Study. *Psychiatric Services (Washington, D.C.)*, *62*(7), 774–81. https://doi.org/10.1176/appi.ps.62.7.774

Buist, A., Speelman, C., Hayes, B., Reay, R., Milgrom, J., Meyer, D., & Condon, J. (2007). Impact of education on women with perinatal depression. *Journal of Psychosomatic Obstetrics and Gynaecology*, *28*(1), 49–54. https://doi.org/10.1080/01674820601143187

Buttner, M. M., O'Hara, M. W., & Watson, D. (2012). The structure of women's mood in the early postpartum. *Assessment*, *19*(2), 247–256.

Buttorff, C., Hock, R. S., Weiss, H. A., Naik, S., Araya, R., Kirkwood, B. R., … Patel, V. (2012). Economic evaluation of a task-shifting intervention for common mental disorders in India. *Bulletin of the World Health Organization*, *90*(11), 813–21. https://doi.org/10.2471/BLT.12.104133

Callaghan, M., Ford, N., & Schneider, H. (2010). A systematic review of task- shifting for HIV treatment and care in Africa. *Human Resources for Health*, *8*, 8. https://doi.org/10.1186/1478-4491-8-8

Carol Bower. (2014). The plight of women and children: Advancing South Africa's least privileged. *The Annals of the American Academy of Political and Social Science*, *652*(106), 1–18.

Charlson, F. J., Diminic, S., Lund, C., Degenhardt, L., & Whiteford, H. a. (2014). Mental and Substance Use Disorders in Sub-Saharan Africa: Predictions of Epidemiological Changes and Mental Health Workforce Requirements for the Next 40 Years. *PLoS ONE*, *9*(10), e110208. https://doi.org/10.1371/journal.pone.0110208

Chibanda, D., Mesu, P., Kajawu, L., Cowan, F., Araya, R., & Abas, M. a. (2011). Problem-solving therapy for depression and common mental disorders in Zimbabwe: piloting a task-shifting primary mental health care intervention in a population with a high prevalence of people living with HIV. *BMC Public Health*, *11*(1), 828. https://doi.org/10.1186/1471-2458-11-828

Chibanda, D., Mesu, P., Kajawu, L., Cowan, F., Araya, R., & Abas, M. A. (2011a). Problem-solving therapy for depression and common mental disorders in Zimbabwe: piloting a task-shifting primary mental health care intervention in a population with a high prevalence of people living with HIV. *BMC Public Health*, *11*, 828.

https://doi.org/1471-2458-11-828 [pii]\r10.1186/1471-2458-11-828

Chibanda, D., Mesu, P., Kajawu, L., Cowan, F., Araya, R., & Abas, M. A. (2011b). Problem-solving therapy for depression and common mental disorders in Zimbabwe: piloting a task-shifting primary mental health care intervention in a population with a high prevalence of people living with HIV. *BMC Public Health*, *11*(1), 828. https://doi.org/1471-2458-11-828 [pii]\r10.1186/1471-2458-11-828

Chibanda, D., Shetty, A. K., Tshimanga, M., Woelk, G., Stranix-Chibanda, L., & Rusakaniko, S. (2014). Group problem-solving therapy for postnatal depression among HIV positive and HIV negative mothers in Zimbabwe. *Journal of the International Association of Providers of AIDS Care*, *13*(4), 335–341. https://doi.org/10.1177/2325957413495564

Chowdhary, N., Sikander, S., Atif, N., Singh, N., Ahmad, I., Fuhr, D. C., … Patel, V. (2014). The content and delivery of psychological interventions for perinatal depression by non-specialist health workers in low and middle income countries: a systematic review. *Best Practice & Research. Clinical Obstetrics & Gynaecology*, *28*(1), 113–133. https://doi.org/10.1016/j.bpobgyn.2013.08.013

Clarke K, King M, Prost A (2013) Psychosocial Interventions for Perinatal Common Mental Disorders Delivered by Providers Who Are Not Mental Health Specialists in Low- and Middle-Income Countries: A Systematic Review and Meta-Analysis. PLoS Med 10(10): e1001541. doi:10.1371/journal. pmed.1001541

Clarke, K., Saville, N., Shrestha, B., Costello, A., King, M., Manandhar, D., … Prost, A. (2014). Predictors of psychological distress among postnatal mothers in rural Nepal: A cross-sectional community-based study. *Journal of Affective Disorders*, *156*, 76–86. https://doi.org/10.1016/j.jad.2013.11.018

Clatworthy, J. (2012). The effectiveness of antenatal interventions to prevent postnatal depression in high-risk women. *Journal of Affective Disorders*, *137*(1–3), 25–34. https://doi.org/10.1016/j.jad.2011.02.029

Coelho, H. F., Murray, L., Royal-Lawson, M., & Cooper, P. J. (2011). Antenatal anxiety disorder as a predictor of postnatal depression: A longitudinal study. *Journal of Affective Disorders*, *129*(1–3), 348–353.

Cohen S, Kamarck T, M. R. (1983). A global measure of perceived stress. *Journal of Social Behaviour*, *24*, 385–396.

Connelly, C. D., Hazen, A. L., Baker-Ericzén, M. J., Landsverk, J., & Horwitz, S. M. (2013). Is screening for depression in the perinatal period enough? The co-occurrence of depression, substance abuse, and intimate partner violence in culturally diverse pregnant women. *Journal of Women's Health (2002)*, *22*(10), 844–52. https://doi.org/10.1089/jwh.2012.4121

Cooper, P. J., Murray, L., Wilson, A., Romaniuk, H., & Ay, L. M. (2003). Controlled trial of the short- and long-term effect of psychological treatment of post-partum depression : 1 . Impact on maternal mood Controlled trial of the short- and long-term effect of psychological. *British Journal of Psychiatry*, *182*, 412–419. https://doi.org/10.1192/bjp.02.177

Cooper, P. J., Tomlinson, M., Swartz, L., Landman, M., Molteno, C., Stein, A., … Murray, L. (2009). Improving quality of mother-infant relationship and infant attachment in socioeconomically deprived community in South Africa: randomised controlled trial. *BMJ (Clinical Research), 338*(b974). https://doi.org/10.1136/bmj.b974

Cooper, P. J., Tomlinson, M., Swartz, L., Woolgar, M., Murray, L., & Molteno, C. (1999). Postpartum depression and the mother–infant relationship in a South African peri-urban settlement. *British Journal of Psychiatry*, *175*, 554–558.

Cooper, S. (2014). South African psychology 20 years into democracy. *South African Journal of Psychology*, *44*(3), 261–266. https://doi.org/10.1177/0081246314537176

Cox, J. L., Holden, J. M., & Sagovsky, R. (1987). Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. *The British Journal of Psychiatry*, *150*, 782–6. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/3651732

Creedy, D., & Dennis, C. (2004). Psychosocial and psychological interventions for preventing postpartum depression (Review). *Cochrane Library*, (4). Retrieved from http://espace.library.uq.edu.au/view/UQ:266505

Cuijpers, P., van Straten, A., & Warmerdam, L. (2007). Problem solving therapies for depression: a meta-analysis. *European Psychiatry : The Journal of the Association of European Psychiatrists*, *22*(1), 9–15. https://doi.org/10.1016/j.eurpsy.2006.11.001

D'Zurilla, T. J., & Nezu, A. M. (2007). *Problem-Solving Therapy: A Positive Approach to Clinical Intervention* (3rd ed.). New York: Springer.

D'Zurilla, T. J., Nezu, A. M., & Maydeu-Olivares, A. (2004). Social problem solving: Theory and assessment. In E. C. Chang, T. D'Zurilla, & L. J. Sanna (Eds.), *Social Problem Solving: Theory, Research, and Training* (pp. 11–27). Washington D.C.: American Psychological Association.

D'Zurilla, T., & Nezu, A. (2010). Problem Solving Therapy. In K. S. Dobson (Ed.), *Handbook of Cognitive Behavioural Therapies* (3rd ed., pp. 197–225). New York: New Guilford Press.

Daniels, K., Nor, B., Jackson, D., Ekström, E., & Doherty, T. (2010). Supervision of community peer counsellors for infant feeding in South Africa: An exploratory qualitative study. *Human Resources for Health*, *8*, 6. https://doi.org/10.1186/1478-4491-8-6

Dawson, A. J., Buchan, J., Duffield, C., Homer, C. S. E., & Wijewardena, K. (2014). Task shifting and sharing in maternal and reproductive health in low-income countries: A narrative synthesis of current evidence. *Health Policy and Planning*, *29*, 396–408. https://doi.org/10.1093/heapol/czt026

de Oliveira Brito, C. N., Alves, S. V., Ludermir, A. B., & de Araújo, T. V. B. (2015). Postpartum depression among women with unintended pregnancy. *Revista de Saúde Pública*, *49*, 33. https://doi.org/10.1590/S0034-8910.2015049005257

den Boer, P. C. A. M., Wiersma, D., & Van den Bosch, R. J. (2004). Why is self-help neglected in the treatment of emotional disorders? A meta-analysis. *Psychological*

Medicine, *34*(6), 959–971. https://doi.org/10.1017/S003329170300179X

Dennis, C.-L., & Chung-Lee, L. (2006). Postpartum depression help-seeking barriers and maternal treatment preferences : A qualitative systematic review. *Birth*, *33*(4), 323–332.

Dennis, C., & Hodnett, E. (2009). Psychosocial and psychological interventions for treating postpartum depression. *Cochrane Library*, (1). Retrieved from http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD006116.pub2/pdf/standard

Dennis, C., Ross, L., & Grigoriadis, S. (2010). Psychosocial and psychological interventions for treating antenatal depression (Review). *The Cochrane Library*, (6). Retrieved from http://www.harechem.com/files/wordocs/Psychosocial and psychological interventions for treating.pdf

Department of Health. (1997). *White Paper for the Transformation of the Health System in South Africa* (No. 667). *Government Gazette*. Pretoria: Department of Health.

Department of Health. Mental Health Care Act 17 of 2002, Government Gazette 1–46 (2004).

Department of Health. (2011). Government Notice: Regulations defining the scope of the profession of psychology. Retrieved October 4, 2016, from http://www.hpcsa.co.za/Uploads/editor/UserFiles/downloads/psych/sept_promulgated_scope_of_practice.pdf

Department of Health. (2013). National Mental Health Policy Framework and Strategic Plan 2013-2020. Pretoria: Department of Health.

Department of Local and Provincial Government. (2011). *The Mitchell 's Plain Nodal Economic Development Profile*.

Dewing, S., Tomlinson, M., Le Roux, I. M., Chopra, M., & Tsai, A. C. (2013). Food insecurity and its association with co-occurring postnatal depression, hazardous drinking, and suicidality among women in peri-urban South Africa. *Journal of Affective Disorders*, *150*(2), 460–465. https://doi.org/10.1016/j.jad.2013.04.040

Di Florio, A., Forty, L., Gordon-Smith, K., Heron, J., Jones, L., Craddock, N., & Jones, I. (2013). Perinatal episodes across the mood disorder spectrum. *JAMA Psychiatry*, *70*(2), 168–75. https://doi.org/10.1001/jamapsychiatry.2013.279

Diego, M., Field, T., Hernandez-Reif, M., Schanberg, S., Kuhn, C., & Gonzalez-Quintero, V. (2008). Prenatal depression restricts fetal growth. *Early Human Development*, *85*, 65–70.

Dirwayi, N. (2002). *Mental illness in primary health care: A study to investigate nurses' knowledge of mental illness and attitudes of nurses toward the mentally ill*. University of Cape Town.

Drake, R. E., Goldman, H. H., Leff, H. S., Lehman, a F., Dixon, L., Mueser, K. T., & Torrey, W. C. (2001). Implementing Evidence-Based Practices in Routine Mental Health Service Settings. *Psychiatric Services (Washington, D.C.)*, *52*(2), 179–82. https://doi.org/10.1176/appi.ps.52.2.179

Duncan, N., Bowman, B., Naidoo, A., Pillay, J., & Roos, V. (2007). *Community Psychology: Analysis, Context and Action*.

Edwards, B., Galletly, C., Semmler-Booth, T., & Dekker, G. (2008). Antenatal psychosocial risk factors and depression among women living in socioeconomically disadvantaged suburbs in Adelaide, South Australia. *The Australian and New Zealand Journal of Psychiatry*, *42*(1), 45–50. https://doi.org/10.1080/00048670701732673

Elkonin, D., & Sandison, A. (2010). Perceptions of registered counsellor efficacy. *South African Journal of Psychology*, *40*(1), 90–96. Retrieved from http://www.sabinet.co.za/abstracts/sapsyc/sapsyc_v40_n1_a9.html

Elkonin, D., & Sandison, a. (2006). Mind the gap: Have the Registered Counsellors fallen through? *South African Journal of Psychology*, *36*(3), 598–612. Retrieved from http://www.sabinet.co.za/abstracts/sapsyc/sapsyc_v36_n3_a10.html

Emdin, C., & Millson, P. (2012). A systematic review evaluating the impact of task shifting on access to antiretroviral therapy in sub-Saharan Africa * Correspondence author : *African Health Sciences*, *12*(3), 318–324.

Evenson, R. J., & Simon, R. W. (2005). Clarifying the relationship between parenthood and depression. *Journal of Health and Social Behavior*, *46*(4), 341–358.

Fairall, L., Petersen, I., & Thornicroft, G. (2015). COBALT: Comorbid Affective Disorders, AIDS/HIV, and Long Term Health. Retrieved from https://clinicaltrials.gov/ct2/show/NCT02407691

Fellmeth, G., Fazel, M., & Plugge, E. (2016). Migration and perinatal mental health in women from low- and middle-income countries: A systematic review and meta-analysis. *British Journal of Obstetrics and Gynaec*, 1–11. https://doi.org/10.1111/1471-0528.14184

Fisher, J., Cabral de Mello, M., Patel, V., Rahman, A., Tran, T., Holton, S., & Holmes, W. (2012a). Prevalence and determinants of common perinatal mental disorders in women in low- and lower-middle-income countries: a systematic review. *Bulletin of the World Health Organization*, *90*(2), 139G–149G. https://doi.org/10.2471/BLT.11.091850

Fisher, J., Cabral de Mello, M., Patel, V., Rahman, A., Tran, T., Holton, S., & Holmes, W. (2012b). Prevalence and determinants of common perinatal mental disorders in women in low- and lower-middle-income countries: A systematic review. *Bulletin of the World Health Organization*, *90*(2), 139G–149G. https://doi.org/10.2471/BLT.11.091850

Fisher, J. R. W., Wynter, K. H., & Rowe, H. J. (2010). Innovative psycho-educational program to prevent common postpartum mental disorders in primiparous women: a before and after controlled study. *BMC Public Health*, *10*(1), 432. https://doi.org/10.1186/1471-2458-10-432

Fisher, J., Tran, T., La, B. T., Kriitmaa, K., Rosenthal, D., & Tran, T. (2010). Common perinatal mental disorders in northern Viet Nam: community prevalence and health care use. *Bulletin of the World Health Organization*, *88*(10), 737–45. https://doi.org/10.2471/BLT.09.067066

Fonseca, A., Gorayeb, R., & Canavarro, M. C. (2015). Women's help-seeking behaviours for depressive symptoms during the perinatal period: Socio-demographic and clinical correlates and perceived barriers to seeking professional help. *Midwifery*, *31*(12), 1177–1185. https://doi.org/10.1016/j.midw.2015.09.002

Freed, R. D., Chan, P. T., Boger, K. D., & Tompson, M. C. (2012). Enhancing maternal depression recognition in health care settings: a review of strategies to improve detection, reduce barriers, and reach mothers in need. *Families, Systems & Health*, *30*(1), 1–18. https://doi.org/10.1037/a0027602

Freeman, M. (2016). Global mental health in low and middle income, especially African countries. *Epidemiology and Psychiatric Sciences*, 1–3. https://doi.org/10.1017/S2045796016000482

Fulton, B. D., Scheffler, R. M., Sparkes, S. P., Auh, E. Y., Vujicic, M., & Soucat, A. (2011). Health workforce skill mix and task shifting in low income countries: a review of recent evidence. *Human Resources for Health*, *9*(1), 1. https://doi.org/10.1186/1478-4491-9-1

Furnham, A., & Hamid, A. (2014). Mental health literacy in non-western countries: a review of the recent literature. *Mental Health Review Journal*, *19*(2), 84–98. https://doi.org/10.1108/MHRJ-01-2013-0004

Ganasen, K., Parker, S., Hugo, C., Stein, D., Emsley, R., & Seedat, S. (2008). Mental health literacy: Focus on developing countries. *African Journal of Psychiatry*, *11*(1), 23–28. https://doi.org/10.4314/ajpsy.v11i1.30251

Gavin, N. I., Gaynes, B. N., Lohr, K. N., Meltzer-brody, S., Gartlehner, G., & Swinson, T. (2005). Perinatal depression: A systematic review of prevalence and incidence. *Obstetrics & Gynecology*, *106*(5), 1071–1083.

Gellis, Z. D., & Kenaley, B. (2007). Problem-solving therapy for depression in adults: A systematic review. *Research on Social Work Practice*, *18*(2), 117–131. https://doi.org/10.1177/1049731507301277

Ginneken, N. van, Tharyan, P., Lewin, S., Rao, G., Romeo, R., & Patel, V. (2011). Non- • specialist health worker interventions for mental health care in low- • and middle-income countries. *Cochrane Database of Systematic Reviews*, (5), 1–21. Retrieved from http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD009149/full

Glavin, K., Smith, L., Sørum, R., & Ellefsen, B. (2010). Redesigned community postpartum care to prevent and treat postpartum depression in women--a one-year follow-up study. *Journal of Clinical Nursing*, *19*(21–22), 3051–62. https://doi.org/10.1111/j.1365-2702.2010.03332.x

Goldberg, D. (1996). A dimensional model for common mental disorders. *British Journal of Psychiatry (Supplementum), June*(30), 44–49.

Goldberg, D., & Huxley, P. (1992). *Common Mental Disorders: A Biosocial Model.* London: Tavistock/Routledge.

Goodman, J. H. (2009). Women's attitudes, preferences, and perceived barriers to treatment for perinatal depression. *Birth*, *36(1)*(March), 60–69.

Goodman, J. H., Chenausky, K. L., & Freeman, M. P. (2014). Anxiety Disorders During Pregnancy. *The Journal of Clinical Psychiatry*, *2129*(October), e1153–e1184. https://doi.org/10.4088/JCP.14r09035

Goodman, J. H., & Tyer-Viola, L. (2010). Detection, treatment, and referral of perinatal depression and anxiety by obstetrical providers. *Journal of Women's Health*, *19*(3), 477–

90. https://doi.org/10.1089/jwh.2008.1352

Goodrich, D., & Kilbourne, A. (2013). Mental health collaborative care and its role in primary care settings. *Current Psychiatry Reports*, *15*(8), 1–17. https://doi.org/10.1007/s11920-013-0383-2.Mental

Grigoriadis, S., VonderPorten, E. H., Mamisashvili, L., Tomlinson, G., Dennis, C. L., Koren, G., … Ross, L. E. (2013). The impact of maternal depression during pregnancy on perinatal outcomes: A systematic review and meta-analysis. *Journal of Clinical Psychiatry*, *74*(4), 321–341. https://doi.org/10.4088/JCP.12r07968

Grote, N., Bridge, J., Gavin, A., Melville, J., Iyengar, S., & Katon, W. (2010). A meta-analysis of depression during pregnancy and the risk of preterm birth, low birth weight, and intrauterine growth restriction. *Archive of General Psychiatry*, *67*(10), 1012–1024. https://doi.org/doi:10.1001/archgenpsychiatry.2010.111

Groves, A. K., Kagee, A., Maman, S., Moodley, D., & Rouse, P. (2012). Associations between intimate partner violence and emotional distress among pregnant women in Durban, South Africa. *Journal of Interpersonal Violence*, *27*(7), 1341–56. https://doi.org/10.1177/0886260511425247

Halbreich, U., & Karkun, S. (2006). Cross-cultural and social diversity of prevalence of postpartum depression and depressive symptoms. *Journal of Affective Disorders*, *91*(2–3), 97–111. https://doi.org/10.1016/j.jad.2005.12.051

Hanlon, C. (2013). Maternal depression in low- and middle-income countries. *International Health*, *5*(1), 4–5. https://doi.org/10.1093/inthealth/ihs003

Hanlon, C., Medhin, G., Alem, A., Araya, M., Abdulahi, A., Hughes, M., … Prince, M. (2008). Detecting perinatal common mental disorders in Ethiopia: Validation of the self-reporting questionnaire and Edinburgh Postnatal Depression Scale. *Journal of Affective Disorders*, *108*(3), 251–262. https://doi.org/10.1016/j.jad.2007.10.023

Hartley, M., Tomlinson, M., Greco, E., Comulada, W. S., Stewart, J., le Roux, I., … Rotheram-Borus, M. J. (2011). Depressed mood in pregnancy: prevalence and correlates in two Cape Town peri-urban settlements. *Reproductive Health*, *8*(9). https://doi.org/10.1186/1742-4755-8-9

Hatton, D. C., Harrison-Hohner, J., Matarazzo, J., Edwards, P., Lewy, a, & Davis, L. (2007). Missed antenatal depression among high risk women: a secondary analysis. *Archives of Women's Mental Health*, *10*(3), 121–3. https://doi.org/10.1007/s00737-007-0180-1

Health Professions Council of South Africa. (2009). The Professional Board for Psychology: Criteria for the training and for the accreditation of institutions offering training of intern clinical psychologists. Retrieved from http://www.hpcsa.co.za/Uploads/editor/UserFiles/downloads/psych/psycho_education/form_104.pdf

Health Professions Council of South Africa. (2015). Professional Board for Psychology: List of Accredited Universities in South Africa. Pretoria: HPCSA. Retrieved from http://www.hpcsa.co.za/uploads/editor/UserFiles/downloads/psych/LIST OF ACCREDITED UNIVERSITIES IN SA-Oct.pdf

Henshaw, E., Sabourin, B., & Warning, M. (2013). Treatment-seeking behaviors and attitudes survey among women at risk for perinatal depression or anxiety. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, *42*(2), 168–177.

Herman, A. A., Stein, D. J., Seedat, S., Heeringa, S. G., Moomal, H., & Williams, D. R. (2009). The South African Stress and Health (SASH) study: 12-month and lifetime prevalence of common mental disorders. *SAMJ-South African …*, *99*(5), 339–344.

Highet, N. J., Gemmill, A. W., & Milgrom, J. (2011). Depression in the perinatal period: awareness, attitudes and knowledge in the Australian population. *The Australian and New Zealand Journal of Psychiatry*, *45*(3), 223–31. https://doi.org/10.3109/00048674.2010.547842

Hong, R. Y., & Cheung, M. W.-L. (2015). The structure of cognitive vulnerabilities to depression and anxiety: Evidence for a common core etiologic process based on a meta-analytic review. *Clinical Psychological Science*, *3*(6), 892–912. https://doi.org/10.1177/2167702614553789

Horowitz, J. A., & Cousins, A. (2006). Postpartum depression treatment rates for at-risk women. *Nursing Research*, *55*(2 Suppl), S23-7. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/16601631

Horwitz, S., Briggs-Gowan, M., Storfer-Isse, R., & Carter, A. (2009). Persistence of maternal depressive symptoms throughout the early years of childhood. *Journal of Women's Health*, *18*(5), 637–645.

Howard, L. M., Molyneaux, E., Dennis, C. L., Rochat, T., Stein, A., & Milgrom, J. (2014). Non-psychotic mental disorders in the perinatal period. *The Lancet*, *384*(9956), 1775–1788. https://doi.org/10.1016/S0140-6736(14)61276-9

Howard, L. M., Oram, S., Galley, H., Trevillion, K., & Feder, G. (2013). Domestic violence and perinatal mental disorders: a systematic review and meta-analysis. *PLoS Medicine*, *10*(5), e1001452. https://doi.org/10.1371/journal.pmed.1001452

Howard, L. M., Piot, P., & Stein, A. (2014). No health without perinatal mental health. *The Lancet*, *384*(9956), 1723–1724. https://doi.org/10.1016/S0140-6736(14)62040-7

Hübner-Liebermann, B., Hausner, H., & Wittmann, M. (2012). Recognizing and treating peripartum depression. *Deutsches Arzteblatt International*, *109*(24), 419–424. https://doi.org/10.3238/arztebl.2012.0419

Hugo, C. J., Boshoff, D. E. L., Traut, A., Zungu-Dirwayi, N., & Stein, D. J. (2003). Community attitudes toward and knowledge of mental illness in South Africa. *Social Psychiatry and Psychiatric Epidemiology*, *38*(12), 715–9. https://doi.org/10.1007/s00127-003-0695-3

Humeniuk, R., Henry-Edwards, S., Ali, R., Poznyak, V., & Monteiro, M. (2010). *The alcohol, smoking and substance involvement screening test (ASSIST). The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST): Guidelines for Use in Primary Care (DraftVersion 1. 1 for Field Testing)*. Geneva: World Health Organisation. https://doi.org/10.1111/j.1360-0443.2007.02114.x

Hung, K. J., Tomlinson, M., Roux, I. M. le, Dewing, S., Choprae, M., & Tsai, A. C. (2014).

Community-based prenatal screening for postpartum depression in a South African township. *International Journal of Gynecology and Obstetrics*, *126*(1), 74–77. https://doi.org/10.1038/nature13314.A

Husain, N., Kiran, T., Sumra, a., Naeem Zafar, S., Ur Rahman, R., Jafri, F., … Bashir Chaudhry, I. (2014). Detecting Maternal Depression in a Low-Income Country: Comparison of the Self-Reporting Questionnaire and the Edinburgh Postnatal Depression Scale. *Journal of Tropical Pediatrics*, *60*(2), 129–133. https://doi.org/10.1093/tropej/fmt097

Institute of Medicine. (2013). *Strengthening human resources through development of candidate core competencies for mental, neurological, and substance use disorders in sub-Saharan Africa: Workshop summary*. (D. Pankevich, T. Wizemann, P. Cuff, & B. Altevogt, Eds.). Washington DC: The National Academies Press. Retrieved from https://www.pubmedcentral.nih.gov/books/NBK153721/

Jack, H., Wagner G., R. G., Petersen, I., Thom, R., Newton R., C. R., Stein, A., … Hofman, K. J. (2014). Closing the mental health treatment gap in South Africa: A review of costs and cost-effectiveness. *Global Health Action*, *7*, 1–11. https://doi.org/10.3402/gha.v7.23431

Jaffee, W. B., & D'Zurilla, T. (2009). Personality, problem solving, and adolescent substance use. *Behavior Therapy*, *40*(1), 93–101.

Jesse, D. E., Dolbier, C. L., & Blanchard, A. (2008). Barriers to seeking help and treatment suggestions for prenatal depressive symptoms: focus groups with rural low-income women. *Issues in Mental Health Nursing*, *29*(1), 3–19. https://doi.org/10.1080/01612840701748664

Jewkes, R., Abrahams, N., & Mvo, Z. (1998). Why do nurses abuse patients? Reflections from South African obstetric services. *Social Science and Medicine*, *47*(11), 1781–1795.

Jewkes, R. K., Dunkle, K., Nduna, M., & Shai, N. (2010). Intimate partner violence, relationship power inequity, and incidence of HIV infection in young women in South Africa: A cohort study. *The Lancet*, *376*(9734), 41–48. https://doi.org/10.1016/S0140-6736(10)60548-X

Johnson, a R., Edwin, S., Joachim, N., Mathew, G., Ajay, S., & Joseph, B. (2015). Postnatal depression among women availing maternal health services in a rural hospital in South India. *Pakistan Journal of Medical Sciences*, *31*(2), 408–413. https://doi.org/10.12669/pjms.312.6702

Jorm, A. F. (2012). Mental health literacy: Empowering the community to take action for better mental health. *The American Psychologist*, *67*(3), 231–43. https://doi.org/10.1037/a0025957

Jorm, A. F., Barney, L. J., Christensen, H., Highet, N. J., Kelly, C. M., & Kitchener, B. a. (2006). Research on mental health literacy: what we know and what we still need to know. *The Australian and New Zealand Journal of Psychiatry*, *40*(1), 3–5. https://doi.org/10.1111/j.1440-1614.2006.01734.x

Jorm, A., Korten, A., Jacomb, P., Christensen, H., Rodgers, B., & Pollitt, P. (1997). "Mental health literacy": A survey of the public's ability to recognise mental disorders and their

beliefs about the effectiveness of treatment. *Medical Journal of Australia*, *166*, 182–186.

Joshi, R., Alim, M., Kengne, A. P., Jan, S., Maulik, P. K., Peiris, D., & Patel, A. A. (2014). Task shifting for non-communicable disease management in low and middle income countries - A systematic review. *PLoS ONE*. https://doi.org/10.1371/journal.pone.0103754

Judd, F., Stafford, L., Gibson, P., & Ahrens, J. (2011). The Early Motherhood Service: an acceptable and accessible perinatal mental health service. *Australasian Psychiatry*, *19*(3), 240–246. https://doi.org/10.3109/10398562.2011.562294

Kagee, A., & Lund, C. (2012). Psychology training directors' reflections on evidence-based practice in South Africa. *South African Journal of Psychology*, *42*(1), 103–113. https://doi.org/10.1177/008124631204200111

Kakuma, R., Kleintjes, S., Lund, C., Drew, N., Green, A., Flisher, A. J., & MHaPP Research Programme Consortium. (2010). Mental Health Stigma: What is being done to raise awareness and reduce stigma in South Africa? *African Journal of Psychiatry*, *13*, 116–124. https://doi.org/10.4314/ajpsy.v13i2.54357

Kakuma, R., Minas, H., van Ginneken, N., Dal Poz, M. R., Desiraju, K., Morris, J. E., … Scheffler, R. M. (2011). Human resources for mental health care: Current situation and strategies for action. *Lancet*, *378*(9803), 1654–63. https://doi.org/10.1016/S0140-6736(11)61093-3

Kathree, T., Selohilwe, O. M., Bhana, A., & Petersen, I. (2014a). Perceptions of postnatal depression and health care needs in a South African sample: the "mental" in maternal health care. *BMC Women's Health*, *14*, 1–11. https://doi.org/10.1186/s12905-014-0140-7

Kathree, T., Selohilwe, O. M., Bhana, A., & Petersen, I. (2014b). Perceptions of postnatal depression and health care needs in a South African sample: the "mental" in maternal health care. *BMC Women's Health*, *14*, 140. https://doi.org/10.1186/s12905-014-0140-7

Kazdin, A. E. (2014a). Evidence-based psychotherapies I: qualifiers and limitations in what we know. *South African Journal of Psychology*, *44*(4), 381–403. https://doi.org/10.1177/0081246314533750

Kazdin, A. E. (2014b). Evidence-based psychotherapies II: changes in models of treatment and treatment delivery. *South African Journal of Psychology*, *45*(1), 3–21. https://doi.org/10.1177/0081246314538733

Kessler, R. C., Abelson, J., Demler, O., Escobar, J. I., Gibbon, M., Guyer, M. E., … Zheng, H. (2004). Clinical calibration of DSM-IV diagnoses in the World Mental Health (WMH) version of the World Health Organization (WHO) Composite International Diagnostic Interview (WMH-CIDI). *International Journal of Methods in Psychiatric Research*, *13*(2), 122–139. https://doi.org/10.1002/mpr.169

Kessler, R. C., & Ustün, T. B. (2004). The World Mental Health (WMH) Survey Initiative Version of the World Health Organization (WHO) Composite International Diagnostic Interview (CIDI). *International Journal of Methods in Psychiatric Research*, *13*(2), 93–121. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/15297906

Kim, J. J., La Porte, L. M., Corcoran, M., Magasi, S., Batza, J., & Silver, R. K. (2010). Barriers to mental health treatment among obstetric patients at risk for depression. *American Journal of Obstetrics and Gynecology*, *202*(3), 312.e1-312.e5. https://doi.org/10.1016/j.ajog.2010.01.004

Kingston, D., McDonald, S., Tough, S., Austin, M.-P., Hegadoren, K., & Lasiuk, G. (2014). Public views of acceptability of perinatal mental health screening and treatment preference: a population based survey. *BMC Pregnancy and Childbirth*, *14*, 67. https://doi.org/10.1186/1471-2393-14-67

Kirmayer, L. J., & Pedersen, D. (2014). Toward a new architecture for global mental health. *Transcultural Psychiatry*, *51*(6), 759–776. https://doi.org/10.1177/1363461514557202

Kishore, Mt., & Gopiram, P. (2014). Psychosocial attributes of substance abuse among adolescents and young adults: A comparative study of users and non-users. *Indian Journal of Psychological Medicine*, *36*, 58. https://doi.org/10.4103/0253-7176.127252

Kitchener, B. A., & Jorm, A. F. (2005). Mental health first aid training: Review of evaluation studies. *Australian and New Zealand Journal of Psychiatry*, *40*(6–8).

Klopper, H. C., Coetzee, S. K., Pretorius, R., & Bester, P. (2012). Practice environment, job satisfaction and burnout of critical care nurses in South Africa. *Journal of Nursing Management*, *20*(5), 685–695.

Kohrt, B. A., Jordans, M. J. D., Rai, S., Shrestha, P., Luitel, N. P., Ramaiya, M. K., … Patel, V. (2015). Therapist competence in global mental health: Development of the ENhancing Assessment of Common Therapeutic factors (ENACT) rating scale. *Behaviour Research and Therapy*, *69*, 11–21. https://doi.org/10.1016/j.brat.2015.03.009

Kotze, L., & Carolissen, R. (2005). The employment patterns of B.Psych. students in the Western Cape. In *Paper presented at the 11th South African Psychology Congress, Cape Town*.

Kruger, L., & Schoombee, C. (2010). The other side of caring: Abuse in a South African maternity ward. *Journal of Reproductive and Infant Psychology*, *28*(1), 84–101.

Kuruvilla, A., & Jacob, K. S. (2007). Poverty, social stress & mental health. *Indian Journal of Medical Research*, *126*, 273–278.

Lancaster, C. a, Gold, K. J., Flynn, H. a, Yoo, H., Marcus, S. M., & Davis, M. M. (2010). Risk factors for depressive symptoms during pregnancy: a systematic review. *American Journal of Obstetrics and Gynecology*, *202*(1), 5–14. https://doi.org/10.1016/j.ajog.2009.09.007

le Roux, I. M., Tomlinson, M., Harwood, J. M., O'Connor, M. J., Worthman, C. M., Mbewu, N., … Rotheram-Borus, M. J. (2013). Outcomes of home visits for pregnant township mothers and their infants in South Africa: a cluster randomised controlled trial. *AIDS*, *27*, 1461–1471. https://doi.org/10.1097/QAD.0b013e3283601b53

Lehmann, U., Van Damme, W., Barten, F., & Sanders, D. (2009). Task shifting: the answer to the human resources crisis in Africa? *Human Resources for Health*, *7*(June), 49. https://doi.org/10.1186/1478-4491-7-49

Leigh, B., & Milgrom, J. (2008). Risk factors for antenatal depression, postnatal depression

and parenting stress. *BMC Psychiatry*, *8*, 24. https://doi.org/10.1186/1471-244X-8-24

Leung, B. M. Y., & Kaplan, B. J. (2009). Perinatal depression: prevalence, risks, and the nutrition link--a review of the literature. *Journal of the American Dietetic Association*, *109*(9), 1566–75. https://doi.org/10.1016/j.jada.2009.06.368

Levy, L. B., & O'Hara, M. W. (2010). Psychotherapeutic interventions for depressed, low-income women: a review of the literature. *Clinical Psychology Review*, *30*(8), 934–50. https://doi.org/10.1016/j.cpr.2010.06.006

Logsdon, M. C., Wisner, K., Sit, D., Luther, J. F., & Wisniewski, S. R. (2011). Depression treatment and maternal functioning. *Depression and Anxiety*, *28*(11), 1020–6. https://doi.org/10.1002/da.20892

Lund, C., Breen, A., Flisher, A. J., Kakuma, R., Corrigall, J., Joska, J. a, … Patel, V. (2010). Poverty and common mental disorders in low and middle income countries: A systematic review. *Social Science & Medicine*, *71*(3), 517–528. https://doi.org/10.1016/j.socscimed.2010.04.027

Lund, C., & Flisher, A. J. (2009). A model for community mental health services in South Africa. *Tropical Medicine and International Health*, *14*(9), 1040–1047. https://doi.org/10.1111/j.1365-3156.2009.02332.x

Lund, C., Kleintjes, S., Kakuma, R., & Flisher, A. J. (2010a). Public sector mental health systems in South Africa: Inter-provincial comparisons and policy implications. *Social Psychiatry and Psychiatric Epidemiology*, *45*(3), 393–404. https://doi.org/10.1007/s00127-009-0078-5

Lund, C., Kleintjes, S., Kakuma, R., & Flisher, A. J. (2010b). Public sector mental health systems in South Africa: inter-provincial comparisons and policy implications. *Social Psychiatry and Psychiatric Epidemiology*, *45*(3), 393–404. https://doi.org/10.1007/s00127-009-0078-5

Lund, C., Myer, L., Stein, D. J., Williams, D. R., & Flisher, A. J. (2012). Mental illness and lost income among adult South Africans. *Social Psychiatry and Psychiatric Epidemiology*. https://doi.org/10.1007/s00127-012-0587-5

Lund, C., Petersen, I., Kleintjes, S., & Bhana, A. (2012). Mental Health Services in South Africa: Taking stock. *African Journal of Psychiatry*, *15*(6), 402–5. https://doi.org/http://dx.doi.org/10.4314/ajpsy.v15i6.48

Lund, C., Schneider, M., Davies, T., Nyatsanza, M., Honikman, S., Bhana, A., … Susser, E. (2014). Task sharing of a psychological intervention for maternal depression in Khayelitsha, South Africa: study protocol for a randomized controlled trial. *Trials*, *15*, 457. https://doi.org/10.1186/1745-6215-15-457

Lund, C., Tomlinson, M., De Silva, M., Fekadu, A., Shidhaye, R., Jordans, M., … Patel, V. (2012). PRIME: A Programme to Reduce the Treatment Gap for Mental Disorders in Five Low- and Middle-Income Countries. *PLoS Medicine*, *9*(12), e1001359. https://doi.org/10.1371/journal.pmed.1001359

Lundahl, B. W., Kunz, C., Brownell, C., Tollefson, D., & Burke, B. L. (2010). A meta-analysis of motivational interviewing: Twenty-five years of empirical studies. *Research*

on Social Work Practice, *20*(2), 137–160. https://doi.org/10.1177/1049731509347850

Mall, S., Lund, C., Vilagut, G., Alonso, J., Williams, D. R., & Stein, D. J. (2014). Days out of role due to mental and physical illness in the South African stress and health study. *Social Psychiatry and Psychiatric Epidemiology*, *50*(3), 461–468. https://doi.org/10.1007/s00127-014-0941-x

Malouff, J. M., Thorsteinsson, E. B., & Schutte, N. S. (2007). The efficacy of problem solving therapy in reducing mental and physical health problems: A meta-analysis. *Clinical Psychology Review*, *27*(1), 46–57. https://doi.org/10.1016/j.cpr.2005.12.005

Manikkam, L., & Burns, J. K. (2012). Antenatal depression and its risk factors: An urban prevalence study in KwaZulu-Natal. *South African Medical Journal*, *102*(12), 940–944. https://doi.org/10.7196/SAMJ.6009

Mann, R., Gilbody, S., & Adamson, J. (2010). Prevalence and incidence of postnatal depression: What can systematic reviews tell us? *Archives of Women's Mental Health*, *13*(4), 295–305. https://doi.org/10.1007/s00737-010-0162-6

Marais, D. L., & Petersen, I. (2015). Health system governance to support integrated mental health care in South Africa: challenges and opportunities. *International Journal of Mental Health Systems*, *9*(1). https://doi.org/10.1186/s13033-015-0004-z

Marcus, S. M., Flynn, H. A., Blow, F., & Barry, K. (2005). A screening study of antidepressant treatment rates and mood symptoms in pregnancy. *Archives of Women's Mental Health*, *8*(1), 25–27. https://doi.org/10.1007/s00737-005-0072-1

Marcus, S. M., Flynn, H. a, Blow, F. C., & Barry, K. L. (2003). Depressive symptoms among pregnant women screened in obstetrics settings. *Journal of Women's Health (2002)*, *12*(4), 373–380. https://doi.org/10.1089/154099904322836528

Mårtensson, L., & Hensing, G. (2012). Health literacy - A heterogeneous phenomenon: A literature review. *Scandinavian Journal of Caring Sciences*, *26*(1), 151–160. https://doi.org/10.1111/j.1471-6712.2011.00900.x

Mathers, C. D., & Loncar, D. (2006). Projections of global mortality and burden of disease from 2002 to 2030. *PLoS Medicine*, *3*(11), 2011–2030. https://doi.org/10.1371/journal.pmed.0030442

Matthey, S. (2008). Using the Edinburgh Postnatal Depression Scale to screen for anxiety disorders. *Depression and Anxiety*, *25*(11), 926–931.

Matthey, S. (2010). Are we overpathologising motherhood? *Journal of Affective Disorders*, *120*(1–3), 263–266. https://doi.org/10.1016/j.jad.2009.05.004

Mayosi, B. M., & Benatar, S. R. (2014). Health and health care in South Africa - 20 years after Mandela. *The New England Journal of Medicine*, *371*(14), 1344–1353.

Mbanga, N. I., Niehaus, D. J. H., Mzamo, N. C., Wessels, C. J., Allen, a, Emsley, R. a, & Stein, D. J. (2002). Attitudes towards and beliefs about schizophrenia in Xhosa families with affected probands. *Curationis*, *25*(1), 69–73. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/12096574

McInnis, M. G., & Merajver, S. D. (2011). Global mental health: Global strengths and

strategies Task-shifting in a shifting health economy. *Asian Journal of Psychiatry*, *4*(3), 165–71. https://doi.org/10.1016/j.ajp.2011.06.002

Mcintyre, D., Doherty, J., & Ataguba, J. (2014). *Universal Health Coverage Assessment South Africa*. *Global Network for Health Equity*. https://doi.org/10.13140/RG.2.1.1174.7683

Meltzer-Brody, S., Zerwas, S., Leserman, J., Holle, A. Von, Regis, T., & Bulik, C. (2011). Eating disorders and trauma history in women with perinatal depression. *Journal of Women's Health (2002)*, *20*(6), 863–70. https://doi.org/10.1089/jwh.2010.2360

Milgrom, J., Gemmill, A., Bilszta, J., Hayes, B., Barnett, B., Brooks, J., … Buist, A. (2008). Antenatal risk factors for postnatal depression: a large prospective study. *Journal Of Affective Disorders*, *108*(1–2), 147–157.

Miller, L., Shade, M., & Vasireddy, V. (2009). Beyond screening: assessment of perinatal depression in a perinatal care setting. *Archives of Women's Mental Health*, *12*(5), 329–34. https://doi.org/10.1007/s00737-009-0082-5

Mineka, S., Watson, D., & Clark, L. (1998). Comorbidity of anxiety and unipolar mood disorders. *Annual Review of Psychology*, *49*, 377–412.

Misri, S., Kendrick, K., Oberlander, T. F., Norris, S., Tomfohr, L., Zhang, H., & Grunau, R. E. (2010). Antenatal depression and anxiety affect postpartum parenting stress: a longitudinal, prospective study. *Canadian Journal of Psychiatry. Revue Canadienne de Psychiatrie*, *55*(4), 222–8. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/20416145

Molyneaux, E., Poston, L., Ashurst-Williams, S., & Howard, L. M. (2014). Obesity and mental disorders during pregnancy and postpartum: A systematic review and meta-analysis. *Obstetrics and Gynecology*, *123*(4), 857–67. https://doi.org/10.1097/AOG.0000000000000170

Morojele, N. K., London, L., Olorunju, S. A., Matjila, M. J., Davids, A. S., & Rendall-Mkosi, K. M. (2010). Predictors of risk of alcohol-exposed pregnancies among women in an urban and a rural area of South Africa. *Social Science and Medicine*, *70*(4), 534–542. https://doi.org/10.1016/j.socscimed.2009.10.040

Murray, L., Cooper, P., Wilson, A., & Romaniuk, H. (2003). Controlled trial of the short-and long-term effect of psychological treatment of post-partum depression 2. Impact on the mother—child relationship and child outcome. *The British Journal of Psychiatry*, *182*, 420–427. https://doi.org/10.1192/bjp.02.178

Murray, L. K., Dorsey, S., Bolton, P., Jordans, M. J., Rahman, A., Bass, J., & Verdeli, H. (2011). Building capacity in mental health interventions in low resource countries: an apprenticeship model for training local providers. *International Journal of Mental Health Systems*, *5*(1), 30. https://doi.org/10.1186/1752-4458-5-30

Mutamba, B. B., van Ginneken, N., Smith Paintain, L., Wandiembe, S., & Schellenberg, D. (2013). Roles and effectiveness of lay community health workers in the prevention of mental, neurological and substance use disorders in low and middle income countries: a systematic review. *BMC Health Services Research*, *13*, 412. https://doi.org/10.1186/1472-6963-13-412

Myers, B. (2015). *Strengthening South Africa's health system through integrating treatment for mental illness into chronic disease care (Project MIND). (Personal Communication).*

Myers, B., Jones, H. E., Doherty, I. A., Kline, T. L., Key, M. E., Johnson, K., & Wechsberg, W. M. (2015). Correlates of Lifetime Trauma Exposure Among Pregnant Women from Cape Town, South Africa. *International Journal of Mental Health and Addiction*, *13*(3), 307–321. https://doi.org/10.1007/s11469-015-9544-3

Myers, B., Stein, D. J., Mtukushe, B., & Sorsdahl, K. (2012). Feasibility and acceptability of screening and brief interventions to address alcohol and other drug use among patients presenting for emergency services in Cape Town, South Africa. *Advances in Preventive Medicine*, *2012*, 569153. https://doi.org/10.1155/2012/569153

Nakku, J. E. M., Okello, E. S., Kizza, D., Honikman, S., Ssebunnya, J., Ndyanabangi, S., … Kigozi, F. (2016). Perinatal mental health care in a rural African district, Uganda: A qualitative study of barriers, facilitators and needs. *BMC Health Services Research*, *16*(1), 295. https://doi.org/10.1186/s12913-016-1547-7

Nelson Mandela Metropolitan University. (2016). Undergraduate programmes: BPsych (Registered Counsellor). Retrieved from http://psychology.nmmu.ac.za/Undergrad-Programmes/BPsych-(Registered-Counsellor)

Nezu, A. M., & Nezu, C. M. (2001). Problem Solving Therapy. *Journal of Psychotherapy Integration*, *11*(2), 187–205.

O'Hara, M. W. (2009). Postpartum Depression: What We Know. *Journal of Clinical Psychology*, *65*(12), 1258–1270. https://doi.org/10.1002/jclp

O'Hara, M. W., & Wisner, K. L. (2014). Perinatal mental illness: Definition, description and aetiology. *Best Practice and Research: Clinical Obstetrics and Gynaecology*, *28*(1), 3–12. https://doi.org/10.1016/j.bpobgyn.2013.09.002

O'Mahen, H. A., & Flynn, H. A. (2008). Preferences and perceived barriers to treatment for depression during the perinatal period. *Journal of Women's Health*, *17*(8), 1301–1309. https://doi.org/10.1089/jwh.2007.0631

Oates, M. (2003). Perinatal psychiatric disorders: a leading cause of maternal morbidity and mortality. *British Medical Bulletin*, *67*(1), 219–229. https://doi.org/10.1093/bmb/ldg011

Padmanathan, P., & De Silva, M. J. (2013). The acceptability and feasibility of task-sharing for mental healthcare in low and middle income countries: a systematic review. *Social Science & Medicine (1982)*, *97*, 82–6. https://doi.org/10.1016/j.socscimed.2013.08.004

Parry, C. D., Morojele, N. K., Myers, B. J., Kekwaletswe, C. T., Manda, S. O., Sorsdahl, K., … Shuper, P. A. (2014). Efficacy of an alcohol-focused intervention for improving adherence to antiretroviral therapy (ART) and HIV treatment outcomes – a randomised controlled trial protocol. *BMC Infectious Diseases*, *14*(500), 1–13. https://doi.org/10.1186/1471-2334-14-500

Paschetta, E., Berrisford, G., Coccia, F., Whitmore, J., Wood, A. G., Pretlove, S., & Ismail, K. M. K. (2014). Perinatal psychiatric disorders: An overview. *American Journal of Obstetrics and Gynecology*, *210*(6), 501–509.e6. https://doi.org/10.1016/j.ajog.2013.10.009

Patel, V. (2009). The future of psychiatry in low- and middle-income countries. *Psychological Medicine*, *39*(11), 1759–1762. https://doi.org/10.1017/S0033291709005224

Patel, V. (2012). Global mental health: From science to action. *Harvard Review of Psychiatry*, *20*(1), 6–12. https://doi.org/10.3109/10673229.2012.649108

Patel, V. (2014). Rethinking mental health care: Bridging the credibility gap. *Intervention*, *12*(1), 15–20.

Patel, V., Araya, R., Chatterjee, S., Chisholm, D., Cohen, A., De Silva, M., … van Ommeren, M. (2007). Treatment and prevention of mental disorders in low-income and middle-income countries. *Lancet*, *370*(9591), 991–1005. https://doi.org/10.1016/S0140-6736(07)61240-9

Patel, V., Araya, R., de Lima, M., Ludermir, A., & Todd, C. (1999). Women, poverty and common mental disorders in four restructuring societies. *Social Science & Medicine*, *49*(11), 1461–1471. https://doi.org/10.1016/S0277-9536(99)00208-7

Patel, V., Rodrigues, M., & DeSouza, N. (2002). Gender, poverty, and postnatal depression: a study of mothers in Goa, India. *American Journal of Psychiatry*, *159*, 43–47. Retrieved from http://journals.psychiatryonline.org/article.aspx?articleid=175270

Patel, V., Simon, G., Chowdhary, N., Kaaya, S., & Araya, R. (2009). Packages of care for depression in low- and middle-income countries. *PLoS Medicine*, *6*(10), e1000159. https://doi.org/10.1371/journal.pmed.1000159

Patel, V., Weiss, H. a, Chowdhary, N., Naik, S., Pednekar, S., Chatterjee, S., … Kirkwood, B. R. (2010). Effectiveness of an intervention led by lay health counsellors for depressive and anxiety disorders in primary care in Goa, India (MANAS): a cluster randomised controlled trial. *Lancet*, *376*(9758), 2086–95. https://doi.org/10.1016/S0140-6736(10)61508-5

Pawlby, S., Hay, D., Sharp, D., Waters, C., & V O'Keane. (2009). Antenatal depression predicts depression in adolescent offspring: Prospective longitudinal community-based study. *Journal of Affective Disorders*, *113*, 236–243. https://doi.org/doi:10.1016/j.jad.2008.05.018

Peltzer, K., Shikwane, E., & Matseke, G. (2014). Psychological Distress and Associated Factors Among a Sample of Pregnant Women in South Africa. *Journal of Psychology in Africa*, *237*(September). Retrieved from http://www.tandfonline.com.ezproxy.is.ed.ac.uk/doi/abs/10.1080/14330237.2011.10820489#aHR0cDovL3d3dy50YW5kZm9ubGluZS5jb20uZXpwcm94eS5pcy5lZC5hYy51ay9kb2kvcGRmLzEwLjEwODAvMTQzMzAyMzcuMjAxMS4xMDgyMDQ4OUBAQDA=

Pengpid, S., Peltzer, K., Skaal, L., & Van der Heever, H. (2013). Screening and brief interventions for hazardous and harmful alcohol use among hospital outpatients in South Africa: results from a randomized controlled trial. *BMC Public Health*, *13*(1), 644. https://doi.org/10.1186/1471-2458-13-644

Petersen, I., Bhana, A., & Baillie, K. (2012a). The feasibility of adapted group-based interpersonal therapy (IPT) for the treatment of depression by community health

workers within the context of task shifting in South Africa. *Community Mental Health Journal*, *48*, 336–341. https://doi.org/10.1007/s10597-011-9429-2

Petersen, I., Bhana, A., & Baillie, K. (2012b). The feasibility of adapted group-based interpersonal therapy (IPT) for the treatment of depression by community health workers within the context of task shifting in South Africa. *Community Mental Health Journal*, *48*(3), 336–41. https://doi.org/10.1007/s10597-011-9429-2

Petersen, I., Bhana, A., & Swartz, L. (2012). Mental Health Promotion and the Prevention of Mental Disorders in South Africa. *African Journal of Psychiatry*, *15*(November), 411–416. Retrieved from http://www.ajop.co.za/Journals/November2012/Mental_Health_Promotion.pdf

Petersen, I., Fairall, L., Egbe, C. O., & Bhana, A. (2014). Optimizing lay counsellor services for chronic care in South Africa: A qualitative systematic review. *Patient Education and Counseling*, *95*(2), 201–210. https://doi.org/10.1016/j.pec.2014.02.001

Petersen, I., Hanass Hancock, J., Bhana, A., & Govender, K. (2014). A group-based counselling intervention for depression comorbid with HIV/AIDS using a task shifting approach in South Africa: A randomized controlled pilot study. *Journal of Affective Disorders*, *158*, 78–84. https://doi.org/10.1016/j.jad.2014.02.013

Petersen, I., & Lund, C. (2011). Mental health service delivery in South Africa from 2000 to 2010: one step forward, one step back. *South African Medical Journal*, *101*(10), 751–7. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/22272856

Petersen, I., Lund, C., Bhana, A., & Flisher, A. J. (2012). A task shifting approach to primary mental health care for adults in South Africa: Human resource requirements and costs for rural settings. *Health Policy and Planning*, *27*(1), 42–51. https://doi.org/10.1093/heapol/czr012

Petersen, I., Lund, C., Bhana, A., & Flisher, A. J. (2012). A task shifting approach to primary mental health care for adults in South Africa: Human resource requirements and costs for rural settings. *Health Policy and Planning*, *27*(1), 42–51. https://doi.org/10.1093/heapol/czr012

Petersen, I., Lund, C., & Stein, D. (2011). Optimizing mental health services in low-income and middle-income countries. *Current Opinion in Psychiatry*, *24*(4), 318–323.

Petersen, I., Lund, C., & Stein, D. J. (2011). Optimizing mental health services in low-income and middle-income countries. *Current Opinion in Psychiatry*, *24*, 318–323. https://doi.org/10.1097/YCO.0b013e3283477afb

Petersen, I., Ssebunnya, J., Bhana, A., & Baillie, K. (2011). Lessons from case studies of integrating mental health into primary health care in South Africa and Uganda. *International Journal of Mental Health Systems*, *5*(1), 8. https://doi.org/10.1186/1752-4458-5-8

Petersen Williams, P., Jordaan, E., Mathews, C., Lombard, C., & Parry, C. D. H. (2014). Alcohol and Other Drug Use during Pregnancy among Women Attending Midwife Obstetric Units in the Cape Metropole, South Africa. *Advances in Preventive Medicine*, *2014*, 871427. https://doi.org/10.1155/2014/871427

Petersen Williams, P., Petersen, Z., Sorsdahl, K., Mathews, C., Everett-Murphy, K., & Parry, C. D. H. (2015). Screening and Brief Interventions for Alcohol and Other Drug Use Among Pregnant Women Attending Midwife Obstetric Units in Cape Town, South Africa: A Qualitative Study of the Views of Health Care Professionals. *Journal of Midwifery & Women's Health*, *60*(4), 401–9. https://doi.org/10.1111/jmwh.12328

Pickett, K. E., & Wilkinson, R. G. (2014). Income inequality and health: A causal review. *Social Science & Medicine*, *128*, 316–326. https://doi.org/10.1016/j.socscimed.2014.12.031

Pierce, D. (2012). Problem solving therapy: Use and effectiveness in general practice. *Australian Family Physician*, *41*(9), 676–679.

Pillay, A. L., Ahmed, R., & Bawa, U. (2013). Clinical psychology training in South Africa: A call to action. *South African Journal of Psychology*, *43*(1), 46–58. https://doi.org/10.1177/0081246312474411

Pillay, R. (2009). Work satisfaction of professional nurses in South Africa: a comparative analysis of the public and private sectors. *Human Resources for Health*, *7*, 15. https://doi.org/10.1186/1478-4491-7-15

Plattner, I. E., & Moagi-Gulubane, S. (2010). Bridging the Gap in Psychological Service Delivery for a Developing Country : Teaching the Bachelor of Psychology Degree in Botswana Bridging the Gap in Psychological Service Delivery for a Developing Country : Teaching the Bachelor of Psychology Degree i. *Journal of Psychology in Africa*, *20*(1), 155–160. https://doi.org/10.1080/14330237.2010.10820357

Pope, C., Ziebland, S., & Mays, N. (2000). Analysing qualitative data. *British Med J*, *320*(January), 5–7. https://doi.org/10.1136/bmj.320.7227.114

Posel, D., & Rogan, M. (2012). Gendered trends in poverty in the post-apartheid period , 1997 – 2006, *29*(1), 1997–2006.

Preez, E. Du, & Roos, V. (2008). The development of counsellor identity-a visual expression. *South African Journal of Psychology*, *38*(4), 699–709. Retrieved from http://repository.up.ac.za/handle/2263/9443

Pretorius, G. (2012). Reflections on the Scope of Practice in the South African Profession of Psychology: A Moral Plea for Relevance and a Future Vision. *South African Journal of Psychology*, *42*(4), 509–521.

Prince, M., Patel, V., Saxena, S., Maj, M., Maselko, J., Phillips, M. R., & Rahman, A. (2007). No health without mental health. *The Lancet*, *370*(9590), 859–877. https://doi.org/10.1016/S0140-6736(07)61238-0

Rahman, A., Fisher, J., Bower, P., Luchters, S., Tran, T., Yasamy, M. T., … Waheed, W. (2013). Interventions for common perinatal mental disorders in women in low- and middle-income countries: A systematic review and meta-analysis. *Bulletin of the World Health Organization*, *91*(8), 593–601. https://doi.org/10.2471/blt.12.109819

Rahman, A., Iqbal, Z., & Harrington, R. (2003). Life events, social support and depression in childbirth: perspectives from a rural community in the developing world. *Psychological Medicine*, *33*(7), 1161–1167. https://doi.org/10.1017/S0033291703008286

Rahman, A., Malik, A., Sikander, S., Roberts, C., & Creed, F. (2008). Cognitive behaviour therapy-based intervention by community health workers for mothers with depression and their infants in rural Pakistan: a cluster-randomised controlled trial. *Lancet*, *372*(9642), 902–909. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2603063/

Ramchandani, P., Richter, L., Stein, A., & Norris, S. (2009). Predictors of postnatal depression in an urban South African cohort. *Journal Of Affective Disorders*, *113*(3), 279–284.

Reay, R., Fisher, Y., Robertson, M., Adams, E., Owen, C., & Kumar, R. (2006). Group interpersonal psychotherapy for postnatal depression: a pilot study. *Archives of Women's Mental Health*, *9*(1), 31–9. https://doi.org/10.1007/s00737-005-0104-x

Rebello, T. J., Marques, A., Gureje, O., & Pike, K. M. (2014). Innovative strategies for closing the mental health treatment gap globally. *Current Opinion in Psychiatry*, *27*, 308–14. https://doi.org/10.1097/YCO.0000000000000068

Richter, L., Rotheram-Borus, M. J., Van Heerden, A., Stein, A., Tomlinson, M., Harwood, J. M., … Tang, Z. (2014). Pregnant women living with HIV (WLH) supported at clinics by peer WLH: A cluster randomized controlled trial. *AIDS and Behavior*, *18*, 706–715. https://doi.org/10.1007/s10461-014-0694-2

Robertson, E., Grace, S., Wallington, T., & Stewart, D. E. (2004). Antenatal risk factors for postpartum depression: a synthesis of recent literature. *General Hospital Psychiatry*, *26*(4), 289–95. https://doi.org/10.1016/j.genhosppsych.2004.02.006

Rochat, T. J., Tomlinson, M., Bärnighausen, T., Newell, M.-L., & Stein, A. (2011). The prevalence and clinical presentation of antenatal depression in rural South Africa. *Journal of Affective Disorders*, *135*(1–3), 362–73. https://doi.org/10.1016/j.jad.2011.08.011

Rogan, M. (2016). Gender and multidimensional poverty in South Africa: Applying the Global Multidimensional Poverty Index (MPI). *Social Indicators Research*, *126*(3), 987–1006.

Roos, A., Faure, S., Lochner, C., Vythilingum, B., & Stein, D. J. (2013). Predictors of distress and anxiety during pregnancy. *African Journal of Psychiatry*, *16*(March), 118–22. https://doi.org/http://dx.doi.org/10.4314/ajpsy.v16i2.15

Rosenfield, S., & Mouzon, D. (2013). Gender and Mental Health. In C. S. Aneshensel, J. C. Phelan, & A. Bierman (Eds.), *Handbook of the Sociology of Mental Health* (pp. 277–296). Dordrecht: Springer.

Ross, L. E., & Dennis, C. L. (2009). The prevalence of postpartum depression among women with substance use, an abuse history, or chronic illness: A systematic review. *Journal of Women's Health*, *18*(4), 475–486. https://doi.org/10.1089/jwh.2008.0953

Ross, L. E., & McLean, L. M. (2006). Anxiety Disorders During Pregnancy and the Postpartum Period. *The Journal of Clinical Psychiatry*, *67*(8), 1285–1298. https://doi.org/10.4088/JCP.v67n0818

Rouillard, M. C. M., Wilson, L., & Weideman, S. (2015). Registered counsellors' perceptions

of their role in the South African context of providing mental health-care services. *South African Journal of Psychology*, *46*(1), 1–11. https://doi.org/10.1177/0081246315591340

Rowe, H. J., & Fisher, J. R. (2010). Development of a universal psycho-educational intervention to prevent common postpartum mental disorders in primiparous women: a multiple method approach. *BMC Public Health*, *10*, 499–514. https://doi.org/10.1186/1471-2458-10-499

Rwakarema, M., Premji, S., Nyanza, E., Riziki, P., & Palacios-Derflingher, L. (2015). Antenatal depression is associated with pregnancy-related anxiety, partner relations, and wealth in women in Northern Tanzania: a cross-sectional study. *BMC Women's Health*, *15*(1), 68. https://doi.org/10.1186/s12905-015-0225-y

Sadock, B. J., Sadock, V. A., & Ruiz, P. (2015). *Kaplan & Sadock's synopsis of psychiatry: Behavioral sciences/clinical psychiatry* (11th ed.). Philadelphia: Wolters Kluwer.

Salisbury, A. L., Lester, B. M., Seifer, R., LaGasse, L., Bauer, C. R., Shankaran, S., … Poole, K. (2007). Prenatal cocaine use and maternal depression: Effects on infant neurobehavior. *Neurotoxicology and Teratology*, *29*(3), 331–340.

Sampson, M., Villarreal, Y., & Rubin, A. (2016). A problem-solving therapy intervention for low-income, pregnant women at risk for postpartum depression. *Research on Social Work Practice*, *26*(3), 236–242. https://doi.org/10.1177/1049731514551143

Sawyer, A., Ayers, S., & Smith, H. (2010). Pre- and postnatal psychological wellbeing in Africa: A systematic review. *Journal of Affective Disorders*, *123*(1–3), 17–29. https://doi.org/10.1016/j.jad.2009.06.027

Schneider, M., Baron, E., Breuer, E., Docrat, S., Honikman, S., Kagee, A., … Lund, C. (2016). Integrating mental health into South Africa's health system: Current status and way forward. In A. Padarath, J. King, & R. English (Eds.), *South African Health Review 2015/2016* (pp. 153–164). Durban: Health Systems Trust.

Schomerus, G., Schwahn, C., Holzinger, a, Corrigan, P. W., Grabe, H. J., Carta, M. G., & Angermeyer, M. C. (2012). Evolution of public attitudes about mental illness: a systematic review and meta-analysis. *Acta Psychiatrica Scandinavica*, *125*(6), 440–52. https://doi.org/10.1111/j.1600-0447.2012.01826.x

Seedat S, Stein DJ, Berk M, et al. (2002). Barriers to treatment among members of a mental health advocacy group in South Africa. *Social Psychiatry and Psychiatric Epidemiology*, *37*, 483–487.

Sheehan, D. V., Harnett-Sheehan, K., & Raj, B. A. (1996). The measurement of disability. *International Clinical Psychopharmacology*, *11*(3), 89–95.

Simms, L. J., Grös, D. F., Watson, D., & O'Hara, M. W. (2008). Parsing the general and specific components of depression and anxiety with bifactor modeling. *Depression and Anxiety*, *25*(7). https://doi.org/10.1002/da.20432

Skeen, S., Kleintjes, S., Lund, C., Petersen, I., Bhana, A., Flisher, A. J., & The Mental Health And Poverty Research Programme Consortium. (2010). "Mental health is everybody"s business': roles for an intersectoral approach in South Africa. *International Review of Psychiatry (Abingdon, England)*, *22*(December), 611–623.

https://doi.org/10.3109/09540261.2010.535510

Sorsdahl, K., Myers, B., Ward, C. L., Matzopoulos, R., Mtukushe, B., Nicol, A., … Stein, D. J. (2014). Adapting a blended motivational interviewing and problem-solving intervention to address risky substance use amongst South Africans. *Psychotherapy Research*, (March 2015), 37–41. https://doi.org/10.1080/10503307.2014.897770

Sorsdahl, K., Myers, B., Ward, C., Matzopoulos, R., Mtukushe, B., Nicol, A., & Stein, D. J. (2014). Screening and brief interventions for substance use in emergency departments in the Western Cape province of South Africa: views of health care professionals. *International Journal of Injury Control and Safety Promotion*, *21*(March 2015), 236–43. https://doi.org/10.1080/17457300.2013.811267

Sorsdahl, K., Petersen Williams, P., Everett-Murphy, K., Vythilingum, B., de Villiers, P., Myers, B., & Stein, D. J. (2015). Feasibility and preliminary responses to a screening and brief intervention program for maternal mental disorders within the context of primary care. *Community Mental Health Journal*, *51*(8), 962–969. https://doi.org/10.1007/s10597-015-9853-9

Sorsdahl, K. R., Mall, S., Stein, D. J., & Joska, J. A. (2010). Perspectives towards mental illness in people living with HIV/AIDS in South Africa. *AIDS Care*, *22*(11), 1418–27. https://doi.org/10.1080/09540121003758655

Sorsdahl, K. R., & Stein, D. J. (2010a). Knowledge of and stigma associated with mental disorders in a South african community sample. *The Journal of Nervous and Mental Disease*, *198*(10), 742–7. https://doi.org/10.1097/NMD.0b013e3181f4b2d7

Sorsdahl, K. R., & Stein, D. J. (2010b). Knowledge of and stigma associated with mental disorders in a South african community sample. *The Journal of Nervous and Mental Disease*, *198*(10), 742–747. https://doi.org/10.1097/NMD.0b013e3181f4b2d7

Sorsdahl, K., Stein, D. J., Grimsrud, A., Seedat, S., Flisher, A. J., Williams, D. R., & Myer, L. (2009). Traditional healers in the treatment of common mental disorders in South Africa. *Journal of Nervous and Mental Disorders*, *197*(6), 434–441. https://doi.org/10.1097/NMD.0b013e3181a61dbc.TRADITIONAL

Sorsdahl, K., Stein, D. J., & Lund, C. (2012). Mental health services in South Africa: scaling up and future directions. *African Journal of Psychiatry*, *15*(3), 168–71. https://doi.org/http://dx.doi.org/10.4314/ajpsy.v15i3.21

Sorsdahl, K., Stein, D. J., & Myers, B. (2015). Psychometric properties of the Social Problem Solving Inventory-Revised Short-Form in a South African population. *International Journal of Psychology*, *50*, 1–9. https://doi.org/10.1002/ijop.12192

South African College of Applied Psychology. (2016). Courses: Bachelor of Psychology (BPsych). Retrieved from http://www.sacap.edu.za/courses/bpsych-degree/

Smith, L. L., Yan, F., Charles, M., Mohiuddin, K., Tyus, D., Adekeye, O., & Holden, K. B. (2017). Exploring the Link Between Substance Use and Mental Health Status: What Can We Learn from the Self-medication Theory? *Journal of Health Care for the Poor and Underserved*, *28*(2), 113-131. doi:10.1353/hpu.2017.0056

Spedding, M. F., Stein, D. J., & Sorsdahl, K. (2015). Task-shifting psychosocial interventions

in public mental health: A review of the evidence in the South African context. *South African Health Review 2014/15*, 73–87. https://doi.org/10.1007/s13398-014-0173-7.2

Stein, A., Pearson, R. M., Goodman, S. H., Rapa, E., Rahman, A., McCallum, M., … Pariante, C. M. (2014). Effects of perinatal mental disorders on the fetus and child. *The Lancet*, *384*(9956), 1800–1819. https://doi.org/10.1016/S0140-6736(14)61277-0

Stein, D. J. (2014). A new mental health policy for South Africa. *South African Medical Journal*, *104*(2), 115. https://doi.org/10.7196/samj.7938

Stein, D. J., Williams, D. R., & Kessler, R. C. (2009). The South African Stress and Health (SASH) study: A scientific base for mental health policy. *South African Medical Journal*, *99*(5), 337.

Stewart, R. C., Umar, E., Tomenson, B., & Creed, F. (2014). A cross-sectional study of antenatal depression and associated factors in Malawi. *Archives of Women's Mental Health*, *17*(2), 145–154. https://doi.org/10.1007/s00737-013-0387-2

Talge, N. M., Neal, C., & Glover, V. Antenatal maternal stress and long-term effects on child neurodevelopment: how and why? *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *48*(3–4), 245–61. https://doi.org/10.1111/j.1469-7610.2006.01714.x

Tannous, L., Gigante, L. P., Fuchs, S. C., & Busnello, E. D. a. (2008). Postnatal depression in Southern Brazil: prevalence and its demographic and socioeconomic determinants. *BMC Psychiatry*, *8*, 1. https://doi.org/10.1186/1471-244X-8-1

The PLOS Medicine Staff (2014). Correction: Psychosocial Interventions for Perinatal Common Mental Disorders Delivered by Providers Who Are Not Mental Health Specialists in Low- and Middle-Income Countries: A Systematic Review and Meta-Analysis. 11(6): e1001678. doi:10.1371/journal.pmed.1001678

Tomlinson, M., O'Connor, M. J., le Roux, I. M., Stewart, J., Mbewu, N., Harwood, J., & Rotheram-Borus, M. J. (2014). Multiple Risk Factors During Pregnancy in South Africa: The Need for a Horizontal Approach to Perinatal Care. *Prevention Science*, *15*(3), 277–282. https://doi.org/10.1007/s11121-013-0376-8

Tomlinson, M., Swartz, L., Cooper, P. J., & Molteno, C. (2004). Social factors and postpartum depression in Khayelitsha , Cape Town. *South African Journal of Psychology*, *34*(3), 409–420.

Trump, L., & Hugo, C. (2006). The barriers preventing effective treatment of South African patients with mental health problems. *South African Psychiatry Review*, *9*(4), 249–260. https://doi.org/10.4314/ajpsy.v9i4.30224

Tsai, A. C., & Tomlinson, M. (2012). Mental health spillovers and the Millennium Development Goals: The case of perinatal depression in Khayelitsha, South Africa. *Journal of Global Health*, *2*(1), 10302. https://doi.org/10.7189/jogh.02.010302

Tsai, A. C., Tomlinson, M., Comulada, W. S., & Rotheram-Borus, M. J. (2016). Intimate Partner Violence and Depression Symptom Severity among South African Women during Pregnancy and Postpartum: Population-Based Prospective Cohort Study. *PLoS Medicine*, *13*(1), 1–23. https://doi.org/10.1371/journal.pmed.1001943

University of Limpopo. (2016). Psychology academic modules: BPsych degree. Retrieved

from https://www.ul.ac.za/index.php?Entity=dept_psychology_aca_mode

University of Venda. (2016). Psychology programmes: BPsych degree. Retrieved from http://www.univen.ac.za/index.php?Entity=Psychology&Sch=4

van't Hof, E., Stein, D. J., Marks, I., Tomlinson, M., & Cuijpers, P. (2011). The effectiveness of problem solving therapy in deprived South African communities: results from a pilot study. *BMC Psychiatry*, *11*(156), 1–8. https://doi.org/10.1186/1471-244X-11-156

van Ginneken, N., Tharyan, P., Lewin, S., Rao, G. N., Meera, S., Pian, J., … Patel, V. (2013). Non-specialist health worker interventions for the care of mental, neurological and substance-abuse disorders in low- and middle-income countries. *The Cochrane Database of Systematic Reviews*, *11*(11), CD009149. https://doi.org/10.1002/14651858.CD009149.pub2

van Heyningen, T., Myer, L., Onah, M., Field, S., Tomlinson, M., & Honikman, S. (2016). Antenatal depression and adversity in urban South Africa. *Journal of Affective Disorders, submitted*, 121–129. https://doi.org/10.1016/j.jad.2016.05.052

Vesga-Lopez, O., Blanco, C., Keyes, K., Olfson, M., Grant, B. F., & Hasin, D. S. (2008). Psychiatric Disorders in Pregnant and Postpartum Women in the United States. *Archives of General Psychiatry*, *65*(7), 805–815. https://doi.org/10.1001/archpsyc.65.7.805

Villegas, L., McKay, K., Dennis, C.-L., & Ross, L. E. (2011). Postpartum depression among rural women from developed and developing countries: A systematic review. *The Journal of Rural Health*, *27*(3), 278–288. https://doi.org/10.1111/j.1748-0361.2010.00339.x

Vythilingum, B. (2009). Anxiety disorders in pregnancy and the postnatal period. *Continuing Medical Education*, *27*(10), 8–10. Retrieved from http://www.ajol.info/index.php/cme/article/view/50326

Vythilingum, B. (2011). Effects of maternal stress and anxiety during pregnancy on the fetus. *Obstetrics & Gynaecology Forum*, *21*, 26–30.

Vythilingum, B., & Roos, A. (2012). Risk factors for substance use in pregnant women in South Africa. *South African Medical Journal*, *102*(11), 851–854. https://doi.org/10.7196/SAMJ.5019

Walter Sisulu University. (2016). Prospectus 2016: Faculty of Humanities, Social Science, and Law. Retrieved from http://www.wsu.ac.za/waltersisulu/wp-content/uploads/2014/01/Faculty-of-Humanities-Social-Science-and-Law-prospectus-2016-final.pdf

Wand, T., White, K., & Patching, J. (2010). Contemporary mental health program implementation and evaluation. *Issues in Mental Health Nursing*, *31*(11), 716–22. https://doi.org/10.3109/01612840.2010.503008

Waqas, A., Raza, N., Lodhi, H. W., Muhammad, Z., Jamal, M., & Rehman, A. (2015). Psychosocial factors of antenatal anxiety and depression in Pakistan: Is social support a mediator? *Plos One*, *10*(1), e0116510. https://doi.org/10.1371/journal.pone.0116510

Watson, D. (2005). Rethinking the mood and anxiety disorders: A quantitative hierarchical model for DSM-V. *Journal of Abnormal Psychology*, *114*(4), 522–536.

https://doi.org/10.1037/0021-843X.114.4.522

Watson, D., O'Hara, M. W., & Stuart, S. (2008). Hierarchical structures of affect and psychopathology and their implications for the classification of emotional disorders. *Depression and Anxiety*, *25*(4), 282–288. https://doi.org/10.1002/da.20496

Whaley, A. L., & Davis, K. E. (2007). Cultural competence and evidence-based practice in mental health services: A complementary perspective. *American Psychologist*, *62*(6), 563–574. https://doi.org/10.1037/0003-066X.62.6.563

Whitton, A., Warner, R., & Appleby, L. (1996). The pathway to care in post-natal depression: Women's attitudes to post-natal depression and its treatment. *British Journal of General Practice*, *46*, 427–428.

Who. (2007). Task shifting to tackle health worker shortages. *Geneva: WHO*, 1–12. https://doi.org/10.1016/S0033-3506(01)00422-X

WHO. (2003). *Organization of Services for Mental Health*. *Mental Health Policy and Service Guidance Package*. Geneva.

WHO. (2011). *Mental Health Atlas 2011*. *World Health Organization*. https://doi.org/10.1093/bja/aes067

Wilkinson, R., & Pickett, K. (2010). *The Spirit Level: Why Equality is Better for Everyone*. London: Penguin.

Williams, D. R., Herman, a, Stein, D. J., Heeringa, S. G., Jackson, P. B., Moomal, H., & Kessler, R. C. (2008). Twelve-month mental disorders in South Africa: prevalence, service use and demographic correlates in the population-based South African Stress and Health Study. *Psychological Medicine*, *38*(2), 211–20. https://doi.org/10.1017/S0033291707001420

World Bank. (2015). Data: GINI Index (World Bank Indicator). Retrieved October 3, 2015, from http://data.worldbank.org/indicator/SI.POV.GINI

World Health Organisation. (2007). *The optimal mix of services. World Health Organisation*. Geneva. Retrieved from http://www.who.int/mental_health/policy/services/2_Optimal Mix of Services_Infosheet.pdf

World Health Organisation. (2008a). *mhGAP: Scaling up care for mental, neurological, and substance use disorders*. *Mental Health Gap Action Programme*. Geneva: World Health Organisation. https://doi.org/ISBN: 9789241596

World Health Organisation. (2008b). Task shifting: Rational redistribution of tasks among health workforce teams: Global recommendations and guidelines. Retrieved from http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Task+shifting+:+rational+redistribution+of+tasks+among+health+workforce+teams+:+global+recommendations+and+guidelines.#2

World Health Organisation. (2010). *mhGAP Intervention Guide for mental, neurological and substance use disorders in non-specialized health settings*. Geneva: World Health Organisation.

World Health Organisation. (2015). *WHO mhGAP Guideline Update: Update of the Mental*

Health Gap Action Programme (mhGap)Guideline for Mental, Neurological and Substance Use Disorders. Geneva: World Health Organisation. https://doi.org/ISBN: 9789241549417

World Health Organisation. (2016). *mhGAP Intervention Guide for mental, neurological and substance use disorders in non-specialized health settings, Version 2.0*. Geneva: World Health Organisation.

World Health Organisation. (2010). *mhGAP Intervention Guide for mental, neurological and substance use disorders in non-specialized health settings*.

World Health Organization. (1992). The ICD-10 Classification of Mental and Behavioural Disorders. *International Classification*, *10*, 1–267. https://doi.org/10.1002/1520-6505(2000)9:5<201::AID-EVAN2>3.3.CO;2-P

World Health Organization. (1994). A User's Guide to the Self Reporting Questionnaire (SRQ). *Geneva: World Health Organization*.

World Health Organization. (2012). *Optimizing health worker roles to improve access to key maternal and newborn health interventions through task shifting*. *World Health Organisation*. Retrieved from http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:health+worker+roles+to+improve+access+to+key+maternal+and+newborn+health+interventions+through+task+shifting#0%5Cnhttp://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Optimizing+health+w

World Health Organization. (2013). *Mental Health Action Plan 2013-2020*. Geneva.

Wylie, L., Hollins Martin, C. J., Marland, G., Martin, C. R., & Rankin, J. (2011). The enigma of post-natal depression: an update. *Journal of Psychiatric and Mental Health Nursing*, *18*(1), 48–58. https://doi.org/10.1111/j.1365-2850.2010.01626.x

Xie, J., Bi, Q., Li, W., Shang, W., Yan, M., Yang, Y., … Zhang, H. (2012). Positive and negative relationship between anxiety and depression of patients in pain: A bifactor model analysis. *PLoS ONE*, *7*(10), 1–7. https://doi.org/10.1371/journal.pone.0047577

Xie, R.-H., Yang, J., Liao, S., Xie, H., Walker, M., & Wen, S. W. (2010). Prenatal family support, postnatal family support and postpartum depression. *The Australian & New Zealand Journal of Obstetrics & Gynaecology*, *50*(4), 340–5. https://doi.org/10.1111/j.1479-828X.2010.01185.x

Zimet, G., Dahlem, N., Zimet, S., & Farley, G. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, *52*(1), 30–41.

Appendix I

Search terms used in the Literature Review (Chapter 2)

Literature searches were conducted in the following databases:

Academic OneFile, Pubmed and Ebscohost (including Academic Search Premier, Africa-Wide Information, CINAHL, Health Source: Nursing/Academic Edition, MEDLINE, PsychARTICLES, PsychINFO, MasterFILE Premier)

The following search terms were included:

S19	perinatal mental health AND interventions OR treatments	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231 Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	3,476,493
S18	perinatal mental health AND screening OR assessment	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231 Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	1,627,852
S17	global mental health AND task shifting OR task sharing	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231 Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	1,156
S16	mental health AND human resources AND task shifting	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231 Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	56
S15	task shifting OR task sharing AND mental health AND (low and middle income countries)	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231 Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	2,601
S14	task shifting OR task sharing AND mental health AND interventions	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	2,623

		Search modes - Boolean/Phrase		
S13	perinatal OR antenatal OR postnatal AND psychological distress AND prevalence	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231 Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	116,409
S12	perinatal AND psychological distress	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231 Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	299
S11	perinatal mental health AND task shifting OR task sharing	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231 Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	1,120
S10	task shifting OR task sharing AND mental health	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231 Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	2,666
S9	perinatal mental health AND (treatment barriers or obstacles or challenges)	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231 Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	71
S8	mental health literacy AND pregnancy OR perinatal OR antenatal	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231 Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	116,363
S7	mental health literacy AND south africa	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231 Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	48
S6	mental health literacy	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231 Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	1,515

S5	perinatal mental health care AND barriers	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231 Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	7
S4	perinatal mental illness AND risk factors OR predictors	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231 Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	357,520
S3	perinatal anxiety AND prevalence	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231 Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	62
S2	perinatal depression AND prevalence	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231 Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	241
S1	perinatal AND mental illness OR common mental disorders	Limiters - Scholarly (Peer Reviewed) Journals; Published Date: 19900101-20171231 Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Academic Search Premier;Africa-Wide Information;CINAHL;Health Source: Nursing/Academic Edition;MasterFILE Premier;MEDLINE;PsycARTICLES;PsycINFO	

Appendix II

Measures used to collect data for Chapter 3's study:

Prevalence and predictors of antenatal psychological distress

Interview questionnaire (Petersen Williams et al., 2014)

Note to Interviewee:

- Your participation is completely voluntary.
- Some of the questions might make you feel uncomfortable as they ask about sensitive issues like your own personal sexual and drug use behaviour.
- You may withdraw at any time without consequences of any kind.

Please note that there are no right or wrong answers to the questions asked. Please feel free to answer just what you think. If there are questions you really do not want to answer, you may skip them.

PLEASE REMEMBER THAT YOUR NAME WILL NOT BE PUT ON THIS QUESTIONNAIRE. Your answers will not be shared with anyone. Only the research staff will have access to the questionnaire once it has been completed.

Thank you for helping us with this study.

Section 1: Demographic and Background Characteristics

Throughout the questionnaire, please circle the correct response.

1. How old are you? _____years

2. What is the highest level of education you have passed?

Less than one year completed	1
Sub A/Class 1/Grade 1	2
Sub B/Class 2/Grade 2	3
Standard 1/Grade 3	4
Standard 2/Grade 4	5
Standard 3/Grade 5	6
Standard 4/Grade 6	7
Standard 5/Grade 7	8
Standard 6/Grade 8	9
Standard 7/Grade 9	10
Standard 8/Grade 10	11
Standard 9/Grade 11	12
Standard 10/Grade 12	13
Further studies – incomplete	14
Diploma/other post school – complete	15
Degree	16

3. What is your current marital status?

Legally married	1
Traditionally married	2
Living with man or woman in union	3
Never married/Single	4
Divorced	5
Married but separated	6
Widow	7

4. Which of the following is the main language spoken at home? (Please circle only one)

English	1	
Afrikaans	2	
IsiXhosa	3	
IsiZulu	4	
SeSotho	5	
SeTswana	6	
SePedi	7	
SiSwati	8	
TshiVenda	9	
Zitsonga	10	
IsiNdebele	11	
Other (Please specify)	12	

5. Which race group do you consider yourself to belong to?

Black/African	1
Coloured	2
White	3
Asian/Indian	4
Other (Please specify)	5

6. Which of the following describes your current employment status?

Unemployed	1
Employed part-time	2
Employed full-time	3
Self-employed	4
Student	5

7. Does your house have:

		Yes	No
A	Electricity	1	0
B	A radio	1	0
C	A television	1	0
D	A telephone	1	0
E	A fridge	1	0
F	A computer	1	0
G	A washing machine	1	0
H	A cell phone (anybody)	1	0

Past Pregnancy Experiences

8. How many times have you been pregnant before now? **(Excluding this pregnancy)**

IF CURRENT PREGNANCY IS THE FIRST PREGNANCY GO TO THE QUESTION 12

Now I would like to ask you about your past pregnancies and the health of your **last** born child. Please note these questions **do not** refer to your current pregnancy.

9.

	Of these pregnancies, how many are				**Outcome of Last Pregnancy**			**Complications**		
Nr	Still Alive	Still Birth	Abortion	Miscarriages	Full Term	Still Born	Voluntary Abortion	Yes	No	N/A
1										
2										
3										
4										

10. Was your current pregnancy planned?

YES	NO

11. How many weeks pregnant are you right now? (If the respondent knows the exact weeks record this number)

Weeks:

Your Current/Main Partner

We would now like to ask some questions about your current partner.

12. Who is your current/main partner?

No one	0
The father of my child	1
Not the father of my child/someone else	2

IF NO ONE, PLEASE MOVE TO SECTION 2

13. Is your current partner male or female?

Male	0
Female	1

[IF FEMALE CHANGE HE TO SHE]

14. Does your current partner support this pregnancy?

No	0
Yes	1
I do not know	9

15. How old is he now? _____ years

16. Does he currently work?

No	0
Yes	1

17. If your current partner is NOT the father of your child, does the father of this child support this pregnancy?

No	0
Yes	1

18.

Which of the following substances does your partner use? *(NON-MEDICAL USE ONLY)*	NO	YES
a.Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	3
b.Alcoholic beverages (beer, wine, spirits, etc.)	0	3
c.Cannabis (marijuana, pot, grass, hash, dagga, etc.)	0	3
d.Cocaine (coke, crack, etc.)	0	3
e.Amphetamine type stimulants (speed, diet pills, ecstacy, tik, etc.)	0	3
f.Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	3
g.Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	3
h.Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	3
i.Opioids (heroin, morphine, methadone, codeine, etc.)	0	3
j.Other – specify:	0	3

If NO ALCOHOL use go to questions 26

		Never	Less than monthly	Monthly	Weekly	Daily or almost daily
19.	How often does he have a drink containing alcohol?	0	1	2	3	4
20.	How often do you drink with him?	0	1	2	3	4
21.	How often does he have six or more drinks on one occasion?	0	1	2	3	4

22. How many drinks containing alcohol does he have on a typical day when he is drinking?

None	0
1 or 2	1
3 or 4	2
5 or 6	3
7 to 9	4
10 or more	5

23. Do you feel pressure to drink alcohol when your partner is drinking?

No	0
Yes	1

If NO DRUG use go to Section 2

		Never	Once a month or less often	Monthly	Weekly	Daily or almost daily
24.	How often does he use drugs other than alcohol?	0	1	2	3	4
25.	How often do you use drugs with him?	0	1	2	3	4
26.	How often is he influenced heavily by drugs? I.e. the drug/s changes him or he acts different to when he is sober.	0	1	2	3	4

27. How many times does he take drugs on a typical day when he is using drugs?

None	0
1 - 2	1
3 - 4	2
5 - 6	3
7 or more	4

28. Do you feel obliged to use drugs when your partner is using drugs?

No	0
Yes	1

Symptom Response Questionnaire (SRQ-20) (WHO, 1994)

The following questions are related to certain pains and problems that may have bothered you the last 30 days. If you think the question applies to you and you had the described problem in the past 30 days answer YES. ON the other hand if the question does not apply to you and you did not have the problem in the past 30 days, answer NO.

1.	Do you often have headaches?	YES	NO
2.	Is your appetite poor?	YES	NO
3.	Do you sleep badly?	YES	NO
4.	Are you easily frightened?	YES	NO
5.	Do your hands shake?	YES	NO
6.	Do you feel nervous, tense or worried?	YES	NO
7.	Is your digestion poor?	YES	NO
8.	Do you have trouble thinking clearly?	YES	NO
9.	Do you feel unhappy?	YES	NO
10.	Do you cry more than usual?	YES	NO
11.	Do you find it difficult to enjoy your daily activities?	YES	NO
12.	Do you find it difficult to make decisions?	YES	NO
13.	Is your daily work suffering?	YES	NO
14.	Are you unable to play a useful part in life?	YES	NO
15.	Have you lost interest in things?	YES	NO
16.	Do you feel that you are a worthless person?	YES	NO
17.	Has the thought of ending your life been on your mind?	YES	NO
18.	Do you feel tired all the time?	YES	NO
19.	Do you have uncomfortable feelings in your stomach?	YES	NO
20.	Are you easily tired?	YES	NO

Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet et al., 1988)

People sometimes look to others for companionship, assistance, or other types of support.

We are interested in how you feel about the following statements. I will read each statement carefully. Indicate how you feel about each statement.

		Very Strongly Disagree	Strongly Disagree	Mildly Disagree	Neutral	Mildly Agree	Strongly Agree	Very Strongly Agree	
1.	There is a special person who is around when I am in need.	1	2	3	4	5	6	7	SO
2.	There is a special person with whom I can share my joys and sorrows.	1	2	3	4	5	6	7	SO
3.	My family really tries to help me.	1	2	3	4	5	6	7	Fam
4.	I get the emotional help and support I need from my family.	1	2	3	4	5	6	7	Fam
5.	I have a special person who is a real source of comfort to me.	1	2	3	4	5	6	7	SO
6.	My friends really try to help me.	1	2	3	4	5	6	7	Fri
7.	I can count on my friends when things go wrong.	1	2	3	4	5	6	7	Fri
8.	I can talk about my problems with my family.	1	2	3	4	5	6	7	Fam
9.	I have friends with whom I can share my joys and sorrows.	1	2	3	4	5	6	7	Fri
10.	There is a special person in my life who cares about my feelings.	1	2	3	4	5	6	7	SO
11.	My family is willing to help me make decisions.	1	2	3	4	5	6	7	Fam
12.	I can talk about my problems with my friends.	1	2	3	4	5	6	7	Fri

Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) (WHO, 2002)

I am going to ask you some questions about your experience of using substances across your lifetime and in the past three months. These substances can be smoked, swallowed, snorted, inhaled, injected or taken in the form of pills. Some of the substances listed may be prescribed by a doctor (like amphetamines, sedatives, pain medications). For this interview, we will not record medications that are used as prescribed by your doctor. However, if you have taken such medications for reasons other than prescription, or taken them more frequently or at higher doses than prescribed, please let me know. While we are also interested in knowing about your use of various illicit drugs, please be assured that information on such use will be treated as strictly confidential

Question 1: In your life, which of the following substances have you used:

	YES	**NO**
Tobacco		
Alcoholic Beverages (beer, wine etc)		
Cannabis (dagga, marijuana)		
Cocaine (rocks, coke, crack)		
Amphetamine Type Stimulants (Tik)		
Inhalants (nitrous glue, petrol)		
Sedatives or sleeping pills		
Hallucinogens (LSD, acid, mushrooms, PCP, special K)		
Opioids (heroin, morphine, methadone, unga)		
Other (inc. Mandrax/Buttons)		

Question 2: In the past three months, how often have you used the substances you mentioned (FIRST DRUG, SECOND DRUG, ETC)

	Never	**Once or Twice**	**Monthly**	**Weekly**	**Daily or Almost Daily**
Tobacco	0	2	3	4	6
Alcoholic Beverages (beer, wine etc)	0	2	3	4	6
Cannabis (dagga, marijuana)	0	2	3	4	6
Cocaine (rocks, coke, crack)	0	2	3	4	6
Amphetamine Type Stimulants (Tik)	0	2	3	4	6
Inhalants (nitrous glue, petrol)	0	2	3	4	6
Sedatives or sleeping pills	0	2	3	4	6
Hallucinogens (LSD, acid, mushrooms, PCP, special K)	0	2	3	4	6
Opioids (heroin, morphine, methadone, unga)	0	2	3	4	6
Other (inc. Mandrax/Buttons)	0	2	3	4	6

Question 3: During the past three months, how often have you had a strong desire or urge to use?

	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
Tobacco	0	3	4	5	6
Alcoholic Beverages (beer, wine etc)	0	3	4	5	6
Cannabis (dagga, marijuana)	0	3	4	5	6
Cocaine (rocks, coke, crack)	0	3	4	5	6
Amphetamine Type Stimulants (Tik)	0	3	4	5	6
Inhalants (nitrous glue, petrol)	0	3	4	5	6
Sedatives or sleeping pills	0	3	4	5	6
Hallucinogens (LSD, acid, mushrooms, PCP, special K)	0	3	4	5	6
Opioids (heroin, morphine, methadone, unga)	0	3	4	5	6
Other (inc. Mandrax/Buttons)	0	3	4	5	6

Question 4: During the <u>past three months</u>, how often has your use of substances led to health, social, legal or financial problems? (please circle)

	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
Tobacco	0	4	5	6	7
Alcoholic Beverages (beer, wine etc)	0	4	5	6	7
Cannabis (dagga, marijuana)	0	4	5	6	7
Cocaine (rocks, coke, crack)	0	4	5	6	7
Amphetamine Type Stimulants (Tik)	0	4	5	6	7
Inhalants (nitrous glue, petrol)	0	4	5	6	7
Sedatives or sleeping pills	0	4	5	6	7
Hallucinogens (LSD, acid, mushrooms, PCP, special K)	0	4	5	6	7
Opioids (heroin, morphine, methadone, unga)	0	4	5	6	7
Other (inc. Mandrax/Buttons)	0	4	5	6	7

Question 5: During the past three months, how often have you failed to do what was normally expected of you because of your use of substance use? (please circle)

	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
Tobacco	0	5	6	7	8
Alcoholic Beverages (beer, wine etc)	0	5	6	7	8
Cannabis (dagga, marijuana)	0	5	6	7	8
Cocaine (rocks, coke, crack)	0	5	6	7	8
Amphetamine Type Stimulants (Tik)	0	5	6	7	8
Inhalants (nitrous glue, petrol)	0	5	6	7	8
Sedatives or sleeping pills	0	5	6	7	8
Hallucinogens (LSD, acid, mushrooms, PCP, special K)	0	5	6	7	8
Opioids (heroin, morphine, methadone, unga)	0	5	6	7	8
Other (inc. Mandrax/Buttons)	0	5	6	7	8

Question 6: Has a friend or relative or anyone else ever expressed concern about your use of specific substances?

	No, Never	Yes, in the past 3 months	Yes, but not in the past 3 months
Tobacco	0	6	3
Alcoholic Beverages (beer, wine etc)	0	6	3
Cannabis (dagga, marijuana)	0	6	3
Cocaine (rocks, coke, crack)	0	6	3
Amphetamine Type Stimulants (Tik)	0	6	3
Inhalants (nitrous glue, petrol)	0	6	3
Sedatives or sleeping pills	0	6	3
Hallucinogens (LSD, acid, mushrooms, PCP, special K)	0	6	3
Opioids (heroin, morphine, methadone, unga)	0	6	3
Other (inc. Mandrax/Buttons)	0	6	3

Question 7: Have you <u>ever</u> tried and failed to control, cut down or stop using specific drugs?

	No, Never	Yes, in the past 3 months	Yes, but not in the past 3 months
Tobacco	0	6	3
Alcoholic Beverages (beer, wine etc)	0	6	3
Cannabis (dagga, marijuana)	0	6	3
Cocaine (rocks, coke, crack)	0	6	3
Amphetamine Type Stimulants (Tik)	0	6	3
Inhalants (nitrous glue, petrol)	0	6	3
Sedatives or sleeping pills	0	6	3
Hallucinogens (LSD, acid, mushrooms, PCP,special K)	0	6	3
Opioids (heroin, morphine, methadone, unga)	0	6	3
Other (inc. Mandrax/Buttons)	0	6	3

Total Score Drug 1: _____ Total Score Drug 3: _____ Total Drug 5:_____

Total Score Drug 2: _____ Total Score drug 4: _____ Total Drug 6: _____

Appendix III

Materials and measures used to collect data for Chapter 4's study:

Mental health literacy among pregnant women

UNIVERSITY OF CAPE TOWN

Department of Psychiatry and Mental Health

J Block Groote Schuur Hospital
Observatory , Cape Town
Tel: 021-4042137
Fax: 021-4488158

PARTICIPANT CONSENT FORM

Project Title: Awareness of, attitudes towards, and stigma associated with mental illness in women during the perinatal period.

Overview of the study: We are asking you to take part in a research study. The aim is to gain a better understanding of how pregnant women perceive mental illness in other pregnant women and also what they think is the most appropriate treatment for mental illness in women during the perinatal period. This study forms part of a doctoral study at the Department of Psychiatry at the University of Cape Town. We would like to use this information to find the most appropriate ways to provide help to women who might be suffering from mental illness. You qualify for this study because you are pregnant, a patient of the Mitchell's Plain MOU, and you are 18 years of age or older. We hope to find 250 women to be in this study. You participation will take approximately 15 minutes.

If you decide to take part in this study:

1) We would like you to answer the questions as honestly as possible.
2) Your answers are private. Your name will not appear anywhere on the answer sheet and only the main researchers will see the answers you provide, so you will not be identified at any stage of the research. Your name and personal details will not be used. Your completed questionnaire will be stored in a locked room.
3) You can choose not to answer any questions that you do not like
4) If you choose not to participate, there will be no bad feelings towards you and it will not affect your access to benefits and services.

Who to contact with questions: If you have any questions about your rights as a participant, concerns or complaints, contact Maxine Spedding, maxinespedding@vodamail.co.za or 082 929 0184. You are also free to contact the Faculty of Health Sciences Human Research Ethics Committee by telephone: (021) 406 6492; fax: (021) 406 6411; or e-mail: sumaya.ariefdien@uct.ac.za. Their offices are located on Floor E52, Room 23 in the Old Main Building of Groote Schuur Hospital, Observatory, 7925.

Consent Statement:
I have read or been read the consent form for this study. I have been given enough time to consider the above information and to ask advice if necessary. If have had the opportunity to ask questions that have been answered to my satisfaction. I am voluntarily agreeing to participate in the study by signing this form.

_____	_____	_____
Name of Participant	**Signature**	**Date**

Vignettes

VIGNETTE 1: Major Depressive Disorder (Antenatal)

Patricia had just discovered that she was pregnant when her husband left her for another woman. After moving in with her sister, when she was six months pregnant, she was still struggling to get over her sense of loss. She felt sad most of the time and nothing could cheer her up, not even the things she normally enjoyed doing. She stayed in her room and cried often. She never felt hungry and struggled to fall asleep at night; she did not want to see her friends or go anywhere; and, she felt guilty even when she had not done anything wrong. Sometimes when she felt particularly worthless, and hopeless about the future, she would find herself thinking about dying.

VIGNETTE 2: Alcohol Dependence

Patricia's life was stressful and so she drank to calm her nerves. She started noticing that she needed more and more to get her to feel relaxed. When Patricia became pregnant, she really tried hard to stop drinking altogether. She had tried to cut down twice in the year before, but she had never been able to keep it up. It seemed as if this time would be no different. By the time she was six months pregnant, she had received two warnings at work already: once for not showing up when she had a hangover and another time because she arrived at work still a little bit drunk from the night before. Patricia knew that her drinking was not good for the baby and so every day she promised herself that she would not have another drink again. Later on in the day when the cravings came, she would tell herself that she would just have one, but that didn't work either.

VIGNETTE 3: Schizophrenia

A year after Patricia's mother passed away, and Patricia had just learned that she was pregnant, she started hearing her mother talking to her. At first, she just heard her mother calling her name, but soon she heard her mother saying things to her. It was very confusing, especially because at the same time, Patricia started to suspect that her neighbours, who had always been very good friends to her, were trying to poison her. Her mother's voice would tell her that the neighbour's had snuck into her house while she was at the shops and put poison in all her food. Patricia stopped eating the food at home and when her husband tried to convince her that her ideas were not true, she started to think that he was in on it too. Six months into her pregnancy with her third child, she started hearing the baby talking to her as well, telling her that she must be careful of the bad people who want to poison them both.

VIGNETTE 4: Panic Disorder

Patricia was a healthy person who was very happy to discover that she was pregnant with her first child. However, when she was six months pregnant, she started having "episodes", especially when she was in large groups of people. She would start feeling a bit shaky and her hands would start to sweat. Within minutes she would be gasping for breath, her heart would be pounding, and she would feel dizzy. Every time it happened, she really believed that something was very wrong with her and that she was going to die. It started becoming more and more difficult for her to go to the shops because she was so scared of having another episode, until eventually she decided that it would be easier if her husband did the shopping on his own.

VIGNETTE 5: Major Depressive Disorder (Postnatal)

About three weeks after Patricia's baby was born, she started to feel like she wasn't coping. She felt sad and tearful most of the time, often crying for no good reason that she could think of. Even though she had heard that being a new mother was tiring, she felt far more exhausted than she expected to and so she slept as often as she could. Patricia's appetite was not what it had been before: she never felt hungry and had begun to lose a lot of weight. She frequently felt irritable and angry, especially when the baby would not stop crying. Once or twice, when she had felt particularly low, she even considered ending her own life. Her friends and family kept telling her how lucky she was to be a mother. She did not feel lucky at all and this made her feel terribly guilty. She started keeping to herself more and more, pretending not to be at home when people came to visit her. She had always enjoyed being with her friends, but now she preferred to be alone.

Data collector's name: _____

MENTAL HEALTH LITERACY MEASURES

Please indicate the answer with an 'X'.

1. How old are you? _____years

2. Where were you born?

In Mitchell's Plain	1
Outside of Mitchell's Plain, in the Western Cape	2
Outside of the Western Cape, in South Africa	3
Outside of South Africa	4

Please specify: _____

3. What is the highest level of education you have passed?

Less than one year completed	1
Sub A/Class 1/Grade 1	2
Sub B/Class 2/Grade 2	3
Standard 1/Grade 3	4
Standard 2/Grade 4	5
Standard 3/Grade 5	6
Standard 4/Grade 6	7
Standard 5/Grade 7	8
Standard 6/Grade 8	9
Standard 7/Grade 9	10
Standard 8/Grade 10	11
Standard 9/Grade 11	12
Standard 10/Grade 12	13
Further studies – incomplete	14
Diploma/other post school – complete	15
Degree	16

4. What is your current marital status?

Legally married	1
Traditionally married	2
Living with man or woman in union	3
Never married/Single	4
Divorced	5
Married but separated	6
Widow	7

5. How many children do you have? _____

6. Which of the following is the main language spoken at home? (Please circle only one)

English	1
Afrikaans	2
IsiXhosa	3
IsiZulu	4
SeSotho	5
SeTswana	6
SePedi	7
SiSwati	8
TshiVenda	9
Zitsonga	10
IsiNdebele	11
Other (Please specify)	12

7. Which of the following describes your current employment status?

Unemployed (unable to find work)	1
Unemployed (due to illness or disability)	2
Unemployed (homemaker)	3
Employed, but on maternity leave	4
Employed part-time	5
Employed full-time	6
Self-employed	7
Student	8

8. Does your house have:

		Yes	No
A	Electricity	1	0
B	A radio	1	0
C	A television	1	0
D	A telephone	1	0
E	A fridge	1	0
F	A computer	1	0
G	A washing machine	1	0
H	A cell phone (anybody)	1	0

9. What is your religion?

Muslim	1
Christian	2
Jewish	2
None	3
Other	4

If 'other', please specify: _____

The interviewer will read a **case study** with you. Please indicate on the scale below, **your view** of Patricia's behaviour as described in the case study. Please respond to **each statement** by **checking** the box that most closely represents your view**.**

NB: VIGNETTE NUMBER: _____

1. Patricia's behaviour is a normal response

☐ Strongly Agree ☐ Agree ☐ Neither Agree or Disagree ☐ Disagree ☐ Strongly Disagree

2. Patricia's behaviour is a normal response for someone who is pregnant / just had a baby

☐ Strongly Agree ☐ Agree ☐ Neither Agree or Disagree ☐ Disagree ☐ Strongly Disagree

3. Patricia's behaviour is typical of a weak character

☐ Strongly Agree ☐ Agree ☐ Neither Agree or Disagree ☐ Disagree ☐ Strongly Disagree

4. Patricia's behaviour is typical of a mental illness

☐ Strongly Agree ☐ Agree ☐ Neither Agree or Disagree ☐ Disagree ☐ Strongly Disagree

5. Patricia's behaviour could be because of a general medical problem eg. Cancer/diabetes

☐ Strongly Agree ☐ Agree ☐ Neither Agree or Disagree ☐ Disagree ☐ Strongly Disagree

6. If this behaviour is typical of a diagnosable condition, it would be called:

_____

Please indicate on the scale below your view of the possible **cause** of Patricia's behaviour as described in the **case study**. Please respond to **each statement** by **checking** the box most closely representing your view.

1.	Problems in her partner or family relationships	Yes ☐	Maybe ☐	No ☐
2.	Work difficulties	Yes ☐	Maybe ☐	No ☐
3.	Stress	Yes ☐	Maybe ☐	No ☐
4.	Brain disease (e.g. "imbalance in chemicals")	Yes ☐	Maybe ☐	No ☐
5.	Heredity / genetic factors	Yes ☐	Maybe ☐	No ☐
6.	Constitutional (natural make-up) weakness	Yes ☐	Maybe ☐	No ☐
7.	Lack of willpower	Yes ☐	Maybe ☐	No ☐
8.	Expecting too much of herself	Yes ☐	Maybe ☐	No ☐
9.	Unconscious conflict	Yes ☐	Maybe ☐	No ☐
10.	Growing up in a broken home	Yes ☐	Maybe ☐	No ☐
11.	Lack of parental affection	Yes ☐	Maybe ☐	No ☐
12.	Overprotective parents	Yes ☐	Maybe ☐	No ☐
13.	Loss of traditional values in society	Yes ☐	Maybe ☐	No ☐
14.	Decay of natural ways of life (modern lifestyle)	Yes ☐	Maybe ☐	No ☐
15.	Exploitation of people in industrial society	Yes ☐	Maybe ☐	No ☐
16.	Will of God	Yes ☐	Maybe ☐	No ☐
17.	Witchcraft, possession by evil spirits	Yes ☐	Maybe ☐	No ☐
18.	Bad luck	Yes ☐	Maybe ☐	No ☐
19.	Thinking too much	Yes ☐	Maybe ☐	No ☐
20.	Lack of support	Yes ☐	Maybe ☐	No ☐
21.	Being pregnant / a mother	Yes ☐	Maybe ☐	No ☐
22.	Poverty	Yes ☐	Maybe ☐	No ☐
23.	Unplanned pregnancy	Yes ☐	Maybe ☐	No ☐
24.	Wrong / bad attitude	Yes ☐	Maybe ☐	No ☐
25.	Being the victim of violence	Yes ☐	Maybe ☐	No ☐

There are a range of different people, medicines and interventions that could possibly **help Patricia**. For each of the following **treatment strategies**, please indicate if you think they will be helpful, harmful, or neither, for Patricia. Please respond to **each statement** by **checking** the box most closely representing your view.

1.	Counsellor	Helpful ☐	Harmful ☐	Neither ☐
2.	Social worker	Helpful ☐	Harmful ☐	Neither ☐
3.	Telephone counselling	Helpful ☐	Harmful ☐	Neither ☐
4.	Psychiatrist	Helpful ☐	Harmful ☐	Neither ☐
5.	Psychologist	Helpful ☐	Harmful ☐	Neither ☐
6.	Close family	Helpful ☐	Harmful ☐	Neither ☐
7.	Close friends	Helpful ☐	Harmful ☐	Neither ☐
8.	Naturopath	Helpful ☐	Harmful ☐	Neither ☐
9.	Vitamins	Helpful ☐	Harmful ☐	Neither ☐
10.	Pain relievers	Helpful ☐	Harmful ☐	Neither ☐
11.	Antidepressants	Helpful ☐	Harmful ☐	Neither ☐
12.	Antibiotics	Helpful ☐	Harmful ☐	Neither ☐
13.	Sleeping pills	Helpful ☐	Harmful ☐	Neither ☐
14.	Antipsychotics	Helpful ☐	Harmful ☐	Neither ☐
15.	Tranquillisers	Helpful ☐	Harmful ☐	Neither ☐
16.	Physical activity	Helpful ☐	Harmful ☐	Neither ☐
17.	Get out more	Helpful ☐	Harmful ☐	Neither ☐
18.	Psychotherapy (talk therapy)	Helpful ☐	Harmful ☐	Neither ☐
19.	Hypnosis	Helpful ☐	Harmful ☐	Neither ☐
20.	Psychiatric ward (in hospital, clinic, etc.)	Helpful ☐	Harmful ☐	Neither ☐
21.	Electro-convulsive therapy (shock therapy)	Helpful ☐	Harmful ☐	Neither ☐
22.	Traditional Healer	Helpful ☐	Harmful ☐	Neither ☐
23.	Spiritual & Religious Advisor (Pastor, Imam)	Helpful ☐	Harmful ☐	Neither ☐

Appendix IV

Materials and measures used to collect data for Chapter 5's study:

PST Intervention

(Please note that the PST workbook and the psycho-education brochure are in separate PDF files)

SCREENING MEASURE

Edinburgh Postnatal Depression Scale (Cox et al., 1987)

For each question there are four answers to choose from. Please choose the answer that best describes how you have been feeling in the last 7 days, not just today.

1. I have been able to laugh and see the funny side of things

- ☐ (0) As much as I always could
- ☐ (1) Not quite so much now
- ☐ (2) Definitely not so much now
- ☐ (3) Not at all

2. I have looked forward with enjoyment to things

- ☐ (0) As much as I ever did
- ☐ (1) Rather less than I used to
- ☐ (2) Definitely less than I used to
- ☐ (3) Hardly at all

3. I have blamed myself unnecessarily when things went wrong

- ☐ (3) Yes, most of the time
- ☐ (2) Yes, some of the time
- ☐ (1) Not very often
- ☐ (0) No, never

4. I have been anxious or worried for no good reason

- ☐ (0) No, not at all
- ☐ (1) Hardly ever
- ☐ (2) Yes, sometimes
- ☐ (3) Yes, very often

5. I have felt scared or panicky for no very good reason

- ☐ (3) Yes, quite a lot
- ☐ (2) Yes, sometimes
- ☐ (1) No, not much
- ☐ (0) No, not at all

6. Things have been getting on top of me

- ☐ (3) Yes, most of the time I haven't been able to cope at all
- ☐ (2) Yes, sometimes I haven't been coping

7. I have been so unhappy that I have had difficulty sleeping

- ☐ **(3) Yes, most of the time**
- ☐ **(2) Yes, sometimes**
- ☐ **(1) Not very often**
- ☐ **(0) No, not at all**

8. I have felt sad or miserable

- ☐ (3) Yes, most of the time
- ☐ (2) Yes, quite often
- ☐ (1) Not very often
- ☐ (0) No, not at all

9. I have been so unhappy that I have been crying

- ☐ (3) Yes, most of the time
- ☐ (2) Yes, quite often
- ☐ (1) Only occasionally
- ☐ (0) No, never

10. The thought of harming myself has occurred to me (refer if yes)

- ☐ (3) Yes, quite often
- ☐ (2) Sometimes
- ☐ (1) Hardly ever
- ☐ (0) Never

STRICTLY CONFIDENTIAL

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NO UNAUTHORISED PERSON MAY HAVE ACCESS TO

MS^2 PST INTERVENTION:

BASELINE QUESTIONNAIRES

Participant No.:	
Intake date:	
EPDS score:	
First appointment date:	
Second appointment date:	
Third appointment date:	
Date of 3/12 post-intervention follow-up assessment:	
Date of 3/12 postnatal follow-up assessment:	

PARTICIPANT CONTACT DETAILS:

Participant's name: _____

Cell phone number 1: _____

Landline number: _____

Cell phone number 2: _____

Home address: _____

_____

_____

Other (e-mail, facebook, skype, twitter):

_____

_____

Friend/family contact

Name: _____

Number: _____

NOTES: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

UNIVERSITY OF CAPE TOWN

Department of Psychiatry and Mental Health

J Block Groote Schuur Hospital
Observatory , Cape Town
Tel: 021-4042137
Fax: 021-4488158

PARTICIPANT CONSENT FORM

Project Title: Registered Counsellor-delivered Problem-Solving Therapy for antenatal depression.

Overview of the study: We are asking you to take part in a research study. The aim is to test the feasibility and effectiveness of counselling interventions delivered by Registered Counsellors. The interventions seek to reduce and prevent depression and other forms of psychological distress in pregnant women who present at the Midwife and Obstetric Units for routine antenatal care. This study forms part of a doctoral research study at the Department of Psychiatry at the University of Cape Town. You qualify for this study because you are 18 years of age or older, a patient of the Mitchell's Plain MOU, and there are indications that you may be experiencing symptoms of depression. Our aim is to recruit 75 women to be in this study. If you decide to take part in the study, you will be asked questions about and may attend sessions related to reducing your distress and improving your mental and physical health.

What we're asking of you:

Today- We will ask you to answer questions about the problems and feelings that you may currently be experiencing and may have experienced in the past. We will also ask about your life history, as well as your family history. This will take about 60 minutes of your time. We will also ask you for contact information so that we can stay in touch with you during the study.

Should you agree to participate, you will have three counselling sessions with the Registered Counsellor that has been assigned to you. Appointments will be made at intervals or times most convenient to you, usually when you have to come to the MOU for your check-up. Each session will last 60 minutes. Should you be unable to attend the full course of counselling, we will ask you to attend at least two sessions. In order to make sure that you are getting the right kind of help, all sessions will be audio-recorded. These recordings will be password protected and only the researchers involved in the project will have access to them. The recordings will be destroyed as soon as the study is over. The Registered Counsellor will also receive weekly supervision from a registered Clinical Psychologist. These sessions are confidential and serve to help the Counsellor to provide the best kind of help.

Three months later and three months after the birth - Three months after your last appointment with the Registered Counsellor, you will receive a call from our research assistant who will ask you more questions about the feelings and problems you may be experiencing, your, as well as your experience of the counselling that you received. This will happen again three months after you have the baby.

Risks or Discomfort: There are some risks to taking part in this study. Answering some of our questions may make you uncomfortable. Also, sometimes the counselling process can cause memories or feelings to return that may be unpleasant or painful. It is important that you talk to your counsellor about these feelings and experiences so that they can find the best way to help you with them. All project staff must sign confidentiality agreements stating that they will not reveal any

information. However, we cannot rule out the possibility that someone might reveal information about you to people outside the study. Furthermore, by law we are obliged to report any suspicion of child abuse or maltreatment. Also, we are required to report to the appropriate person/s if we feel that you or someone in your life is at risk of being harmed. In such instances agreements of confidentiality may be breached. Your decision to take part or not take part in this study or decision to drop out of the study will not affect your access to any services or benefits.

Benefits of Taking Part in The Study: Taking part in the study may help you to cope with some of your problems and worries in more effective ways and so decrease your experience of psychological and emotional distress, and increase your quality of life. You will also help us understand the best way to help pregnant women who are experiencing difficulties and might have or be at risk for developing psychological problems. ***While you will not receive any financial reimbursement for your participation, you will be provided with light refreshments at each session***.

Being In The Study Is Voluntary And Confidential: Taking part in this study is completely up to you. All your information will be used for research purposes only. We will keep your information private. If you don't want to be in the study, that is okay. If you don't want to answer a certain question or don't want to be in a certain part of the study that is also okay. If you choose not to take part or if you drop out, it will not affect any benefits you may be getting and you may still receive counselling if you would like to. We will also still give you referrals to any services you may need.

Privacy: Anyone who is working with any of the information you give us has to sign an agreement not to share what you tell us. Your answers will be given a special number instead of your name. No one else will know these are your answers. In research reports, your answers will always be grouped with other people's answers or disguised to protect you from being recognized. All confidential data will be stored in double-locked file cabinets. The screener and consent forms will be destroyed after one year of the completion of study activities.

Future Contact: In the future, we may contact you to see if you want to take part in more study activities or another study. If we do that, we will tell you about that study and ask you to complete a separate consent form if you agree to participate.

Who to Contact: If you have any questions about your rights as a participant, concerns or complaints, contact Maxine Spedding, maxinespedding@vodamail.co.za or 082 929 0184. ***You are also free to contact the Faculty of Health Sciences Human Research Ethics Committee by telephone: (021) 406 6492; fax: (021) 406 6411; or e-mail: sumaya.ariefdien@uct.ac.za. Their offices are located on Floor E52, Room 23 in the Old Main Building of Groote Schuur Hospital, Observatory, 7925.***

Indicating Consent: Because we have given you a lot of information, please tell me in your own words what you understand us to be asking of you. In the box below, please put your initials if you agree to each of the following activities. You do not give up any rights by initialling any of the lines.

	Initials	**What We're Asking of You**
1		I agree to take part in the study, which has been fully described to me. I will answer questions today and to the best of my ability attend all the sessions.
2		Agree to provide contact information so researcher can keep in touch and remind me of future sessions
3		I agree to come back for additional sessions, if chosen.
4		I understand that in about 3 and 6 months I will be receiving phone calls

Declaration by participant

By signing below, I …….. agree to take part in counselling intervention

I declare that:

- I have read or had read to me this information and consent form and it is written in a language with which I am fluent and comfortable.
- I have had a chance to ask questions and all my questions have been adequately answered.
- I understand that taking part in this study is **voluntary** and I have not been pressured to take part. I also understand that I do not give up any rights by signing below.
- I may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- I may be asked to leave the study before it has finished, if the researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.
- I have received an unsigned copy of this form to keep.

Signed at (*place*) ..... on (*date*) ……
Day/Month/Year

…… **……**

Signature of participant Signature of counsellor

……..

Signature of researcher

DEMOGRAPHIC INFORMATION

1. How old are you? _____years

2. Where were you born?

In Mitchell's Plain	1
Outside of Mitchell's Plain, in the Western Cape	2
Outside of the Western Cape, in South Africa	3
Outside of South Africa	4

Please specify: _____

3. What is the highest level of education you have passed?

Less than one year completed	1
Sub A/Class 1/Grade 1	2
Sub B/Class 2/Grade 2	3
Standard 1/Grade 3	4
Standard 2/Grade 4	5
Standard 3/Grade 5	6
Standard 4/Grade 6	7
Standard 5/Grade 7	8
Standard 6/Grade 8	9
Standard 7/Grade 9	10
Standard 8/Grade 10	11
Standard 9/Grade 11	12
Standard 10/Grade 12	13
Further studies – incomplete	14
Diploma/other post school – complete	15
Degree	16

4. What is your current relationship status?

Legally married	1
Traditionally married	2
Living with man or woman in union	3
Never married/Single	4
Divorced	5
Married but separated	6
Widow	7

5. How many children (under the age of 18) do you have? Ages and genders?

	Age	Gender
1		
2		
3		
4		
5		

6. How many people normally live in your household, including yourself? (Include people who live there for more than 6 months of the year)?

_____

7. How many of these are adults (over the age of 18 years)?

_____

8. What is your religion?

Muslim	1
Christian	2
Jewish	2
None	3
Other	4

If 'other', please specify: _____

9. Which of the following is the main language spoken at home? (Please circle only one)

English	1
Afrikaans	2
IsiXhosa	3
IsiZulu	4
SeSotho	5
SeTswana	6
SePedi	7
SiSwati	8
TshiVenda	9
Zitsonga	10
IsiNdebele	11
Other (Please specify)	12

10. Which race group do you consider yourself to belong to?

Black/African	1
Coloured	2
White	3
Asian/Indian	4
Other (Please specify)	5

11. Which of the following describes your current employment status?

Unemployed (unable to find work)	1
Unemployed (due to illness or disability)	2
Unemployed (homemaker)	3
Employed, but on maternity leave	4
Employed part-time	5
Employed full-time	6
Self-employed	7
Student	8

12. Do you receive any social assistance in the form of a government grant?

No	1
Yes (Childcare Grant)	2
Yes (Disability Grant)	3
Yes (Care Dependency Grant)	4

13. What is your **own** average income per month (over the last 6 months)? Your best estimate is fine.

Less than R1000 per month	1
R1000 – R5000 per month	2
R5000 to R10 000 per month	3
More than R10 000 per month	4

14. What is your average **household** income per month (over the last 6 months)? Your best estimate is fine.

Less than R1000 per month	1
R1000 – R5000 per month	2
R5000 to R10 000 per month	3
R10 000 – R15 000 per month	4
More than R15 000 per month	5

15. If you are currently in a married or married-like relationship, what is your partner's/spouse's current employment status?

Unemployed (unable to find work)	1
Unemployed (due to illness or disability)	2
Unemployed (homemaker)	3
Employed part-time	4
Employed full-time	5
Self-employed	6
Student	7

16. How long have you lived at your current address?

_____ years; _____ months.

17. Which of the following best describes your home (type of dwelling)?

Shack	1
Wendy house or backyard dwelling	2
House	3
Flat	4
Refugee centre / Shelter	5
Other	6

18. Is the house where you stay owned, rented, or an informal settlement plot?

Owned	1
Rented	2
Informal settlement	3
Other	4

If 'other', please specify: _____

19. Do you personally do any of the following (please tick all that apply)?

		YES	NO
19.1	Shop at supermarkets	1	2
19.2	Use any financial services (such as a bank account, ATM card or credit card)	1	2
19.3	Have an account at a retail store (e.g. Pep, Jet, etc.)	1	2

20. Does your house have:

		Yes	No
A	Electricity	1	0
B	A radio	1	0
C	A television	1	0
D	A telephone	1	0
E	A fridge	1	0
F	A computer	1	0
G	A washing machine	1	0
H	A cell phone (anybody)	1	0

Past Pregnancy Experiences

21. How many times have you been pregnant before now? (Excluding this pregnancy) ☐

22. Now I would like to ask you about your past pregnancies and the health of your **last** born child. Please note these questions **do not** refer to your current pregnancy.

	Of these pregnancies, how many are				**Outcome of Last Pregnancy**			**Complications**		
Nr	Still Alive	Still Birth	Abortion	Miscarriages	Full Term	Still Born	Voluntary Abortion	Yes	No	N/A
1										
2										
3										
4										

23. Was your current pregnancy planned? YES | NO

24. How many weeks pregnant are you right now? (If the respondent knows the exact weeks record this number)

_____ WEEKS

Symptom Response Questionnaire (SRQ-20) (WHO, 1994)

The following questions are related to certain pains and problems that may have bothered you the last 30 days. If you think the question applies to you and you had the described problem in the past 30 days answer YES. ON the other hand if the question does not apply to you and you did not have the problem in the past 30 days, answer NO.

1.	Do you often have headaches?	YES	NO
2.	Is your appetite poor?	YES	NO
3.	Do you sleep badly?	YES	NO
4.	Are you easily frightened?	YES	NO
5.	Do your hands shake?	YES	NO
6.	Do you feel nervous, tense or worried?	YES	NO
7.	Is your digestion poor?	YES	NO
8.	Do you have trouble thinking clearly?	YES	NO
9.	Do you feel unhappy?	YES	NO
10.	Do you cry more than usual?	YES	NO
11.	Do you find it difficult to enjoy your daily activities?	YES	NO
12.	Do you find it difficult to make decisions?	YES	NO
13.	Is your daily work suffering?	YES	NO
14.	Are you unable to play a useful part in life?	YES	NO
15.	Have you lost interest in things?	YES	NO
16.	Do you feel that you are a worthless person?	YES	NO
17.	Has the thought of ending your life been on your mind?	YES	NO
18.	Do you feel tired all the time?	YES	NO
19.	Do you have uncomfortable feelings in your stomach?	YES	NO
20.	Are you easily tired?	YES	NO

Sheehan Disability Scale (Sheehan et al., 1996)

Work

Depression has disrupted your work :

Not at all — Mildly — Moderately — Markedly — Extremely

0 1 2 3 4 5 6 7 8 9 10

Social Life

Depression has disrupted your social life :

Not at all — Mildly — Moderately — Markedly — Extremely

0 1 2 3 4 5 6 7 8 9 10

Family Life/Home responsibilities

Depression has disrupted your family life/home responsibilities :

Not at all — Mildly — Moderately — Markedly — Extremely

0 1 2 3 4 5 6 7 8 9 10

Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) (WHO, 2002)

I am going to ask you some questions about your experience of using substances across your lifetime and in the past three months. These substances can be smoked, swallowed, snorted, inhaled, injected or taken in the form of pills. Some of the substances listed may be prescribed by a doctor (like amphetamines, sedatives, pain medications). For this interview, we will not record medications that are used as prescribed by your doctor. However, if you have taken such medications for reasons other than prescription, or taken them more frequently or at higher doses than prescribed, please let me know. While we are also interested in knowing about your use of various illicit drugs, please be assured that information on such use will be treated as strictly confidential

Question 1: In your life, which of the following substances have you used:

	YES	**NO**
Tobacco		
Alcoholic Beverages (beer, wine etc)		
Cannabis (dagga, marijuana)		
Cocaine (rocks, coke, crack)		
Amphetamine Type Stimulants (Tik)		
Inhalants (nitrous glue, petrol)		
Sedatives or sleeping pills		
Hallucinogens (LSD, acid, mushrooms, PCP, special K)		
Opioids (heroin, morphine, methadone, unga)		
Other (inc. Mandrax/Buttons)		

Question 2: In the past three months, how often have you used the substances you mentioned (FIRST DRUG, SECOND DRUG, ETC)

	Never	**Once or Twice**	**Monthly**	**Weekly**	**Daily or Almost Daily**
Tobacco	0	2	3	4	6
Alcoholic Beverages (beer, wine etc)	0	2	3	4	6
Cannabis (dagga, marijuana)	0	2	3	4	6
Cocaine (rocks, coke, crack)	0	2	3	4	6
Amphetamine Type Stimulants (Tik)	0	2	3	4	6
Inhalants (nitrous glue, petrol)	0	2	3	4	6
Sedatives or sleeping pills	0	2	3	4	6
Hallucinogens (LSD, acid, mushrooms, PCP, special K)	0	2	3	4	6
Opioids (heroin, morphine, methadone, unga)	0	2	3	4	6
Other (inc. Mandrax/Buttons)	0	2	3	4	6

Question 3: During the past three months, how often have you had a strong desire or urge to use?

	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
Tobacco	0	3	4	5	6
Alcoholic Beverages (beer, wine etc)	0	3	4	5	6
Cannabis (dagga, marijuana)	0	3	4	5	6
Cocaine (rocks, coke, crack)	0	3	4	5	6
Amphetamine Type Stimulants (Tik)	0	3	4	5	6
Inhalants (nitrous glue, petrol)	0	3	4	5	6
Sedatives or sleeping pills	0	3	4	5	6
Hallucinogens (LSD, acid, mushrooms, PCP, special K)	0	3	4	5	6
Opioids (heroin, morphine, methadone, unga)	0	3	4	5	6
Other (inc. Mandrax/Buttons)	0	3	4	5	6

Question 4: During the <u>past three months</u>, how often has your use of substances led to health, social, legal or financial problems? (please circle)

	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
Tobacco	0	4	5	6	7
Alcoholic Beverages (beer, wine etc)	0	4	5	6	7
Cannabis (dagga, marijuana)	0	4	5	6	7
Cocaine (rocks, coke, crack)	0	4	5	6	7
Amphetamine Type Stimulants (Tik)	0	4	5	6	7
Inhalants (nitrous glue, petrol)	0	4	5	6	7
Sedatives or sleeping pills	0	4	5	6	7
Hallucinogens (LSD, acid, mushrooms, PCP, special K)	0	4	5	6	7
Opioids (heroin, morphine, methadone, unga)	0	4	5	6	7
Other (inc. Mandrax/Buttons)	0	4	5	6	7

Question 5: During the past three months, how often have you failed to do what was normally expected of you because of your use of substance use? (please circle)

	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
Tobacco	0	5	6	7	8
Alcoholic Beverages (beer, wine etc)	0	5	6	7	8
Cannabis (dagga, marijuana)	0	5	6	7	8
Cocaine (rocks, coke, crack)	0	5	6	7	8
Amphetamine Type Stimulants (Tik)	0	5	6	7	8
Inhalants (nitrous glue, petrol)	0	5	6	7	8
Sedatives or sleeping pills	0	5	6	7	8
Hallucinogens (LSD, acid, mushrooms, PCP, special K)	0	5	6	7	8
Opioids (heroin, morphine, methadone, unga)	0	5	6	7	8
Other (inc. Mandrax/Buttons)	0	5	6	7	8

Question 6: Has a friend or relative or anyone else ever expressed concern about your use of specific substances?

	No, Never	Yes, in the past 3 months	Yes, but not in the past 3 months
Tobacco	0	6	3
Alcoholic Beverages (beer, wine etc)	0	6	3
Cannabis (dagga, marijuana)	0	6	3
Cocaine (rocks, coke, crack)	0	6	3
Amphetamine Type Stimulants (Tik)	0	6	3
Inhalants (nitrous glue, petrol)	0	6	3
Sedatives or sleeping pills	0	6	3
Hallucinogens (LSD, acid, mushrooms, PCP, special K)	0	6	3
Opioids (heroin, morphine, methadone, unga)	0	6	3
Other (inc. Mandrax/Buttons)	0	6	3

Question 7: Have you <u>ever</u> tried and failed to control, cut down or stop using specific drugs?

	No, Never	Yes, in the past 3 months	Yes, but not in the past 3 months
Tobacco	0	6	3
Alcoholic Beverages (beer, wine etc)	0	6	3
Cannabis (dagga, marijuana)	0	6	3
Cocaine (rocks, coke, crack)	0	6	3
Amphetamine Type Stimulants (Tik)	0	6	3
Inhalants (nitrous glue, petrol)	0	6	3
Sedatives or sleeping pills	0	6	3
Hallucinogens (LSD, acid, mushrooms, PCP,special K)	0	6	3
Opioids (heroin, morphine, methadone, unga)	0	6	3
Other (inc. Mandrax/Buttons)	0	6	3

Total Score Drug 1: _____ Total Score Drug 3: _____ Total Drug 5:_____

Total Score Drug 2: _____ Total Score drug 4: _____ Total Drug 6: _____

The Social Problem-Solving Inventory Revised (SPSI-R; D'Zurilla et al., 1996)

I am going to read to you ways you might think, feel and act when faced with a problem in everyday living. A problem is something important in your life that bothers you a lot, but you don't right away know how to make it better or stop it from bothering you so much. The problem could be something about yourself (thoughts, feelings, behaviour, health, appearance) or relationships with other people (family, friends) or your environment and the things that you own.

	Not at all true of me	Slightly true of me	Moderately true of me	Very true of me	Extremely true of me
1. I feel afraid when I have an important problem to solve	**0**	**1**	**2**	**3**	**4**
2. When making decisions, I do not think carefully about my many options	**0**	**1**	**2**	**3**	**4**
3. I get nervous and unsure of myself when I have to make an important decision	**0**	**1**	**2**	**3**	**4**
4. When my first efforts to solve a problem fail, I give up quickly because finding a solution is too difficult	**0**	**1**	**2**	**3**	**4**
5. Sometimes even difficult problems can have a way of moving my life forward in positive ways	**0**	**1**	**2**	**3**	**4**
6. If I avoid problems, they will generally go away on their own	**0**	**1**	**2**	**3**	**4**
7. When I can't solve a problem, I get very frustrated	**0**	**1**	**2**	**3**	**4**
8. If I am faced with a difficult problem, I probably will not be able to solve it on my own no matter how hard I try	**0**	**1**	**2**	**3**	**4**
9. Whenever I have a problem, I believe that it can be solved	**0**	**1**	**2**	**3**	**4**
10. I try to do anything I can in order to avoid problems in my life	**0**	**1**	**2**	**3**	**4**
11. Difficult problems make me very upset	**0**	**1**	**2**	**3**	**4**
12. When I have a decision to make, I take the time to try to predict the positive and negative consequences of each possible option before I act	**0**	**1**	**2**	**3**	**4**
13. When problems occur in my life, I like to deal with them as soon as possible	**0**	**1**	**2**	**3**	**4**
14. When I am trying to solve a problem I go with the first good idea that comes to mind	**0**	**1**	**2**	**3**	**4**
15. When I am faced with a difficult problem, I believe that I will be able to solve it on my own if I try hard enough	**0**	**1**	**2**	**3**	**4**
16. When I have a problem to solve, one of the first things I do is get as many facts about the problem as possible	**0**	**1**	**2**	**3**	**4**
17. When a problem happens in my life, I put off trying to solve it for as long as possible	**0**	**1**	**2**	**3**	**4**
18. I spend more time avoiding my problems than solving them	**0**	**1**	**2**	**3**	**4**
19. Before I try to solve a problem, I set a specific goal so that I know exactly what I want to accomplish	**0**	**1**	**2**	**3**	**4**

The Social Problem-Solving Inventory Revised (cont.)

	Not at all true of me	Slightly true of me	Moderately true of me	Very true of me	Extremely true of me
20. When I have a decision to make, I do not take the time to consider the pros and cons of each option	**0**	**1**	**2**	**3**	**4**
21. After carrying out a solution to a problem, I try to evaluate as carefully as possible how much the situation has changed for the better	**0**	**1**	**2**	**3**	**4**
22. I put of solving problems until it is too late to do anything about them	**0**	**1**	**2**	**3**	**4**
23. When I am trying to solve a problem, I think of as many options as possible until I cannot come up with any more ideas	**0**	**1**	**2**	**3**	**4**
24. When making decisions, I go with my “gut feeling” without thinking too much about the consequences of each option	**0**	**1**	**2**	**3**	**4**
25. I am too impulsive when it comes to making decisions	**0**	**1**	**2**	**3**	**4**

Perceived Stress Scale (Cohen & Kamarck, 1983)

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate by circling how often you felt or thought a certain way.

SCORING:
0 = Never
1 = Almost Never
2 = Sometimes
3 = Fairly Often
4 = Very Often

1. In the last month, how often have you been upset because of something that happened unexpectedly?..... 0 1 2 3 4

2. In the last month, how often have you felt that you were unable to control the important things in your life?..... 0 1 2 3 4

3. In the last month, how often have you felt nervous and "stressed"? 0 1 2 3 4

4. In the last month, how often have you felt confident about your ability to handle your personal problems?..... 0 1 2 3 4

5. In the last month, how often have you felt that things were going your way?..... 0 1 2 3 4

6. In the last month, how often have you found that you could not cope with all the things that you had to do? 0 1 2 3 4

7. In the last month, how often have you been able to control irritations in your life?.....0 1 2 3 4

8. In the last month, how often have you felt that you were on top of things?....0 1 2 3 4

9. In the last month, how often have you been angered because of things that were outside of your control? 0 1 2 3 4

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?..... 0 1 2 3 4

Life Events (Kessler & Ustün, 2004)

In the past 12 months, did you experience any of the following life events?

a) A serious illness or injury?
- ☐ Yes
- ☐ No
- ☐ Don't Know

b) Being the victim of a serious physical attack or assault?
- ☐ Yes
- ☐ No
- ☐ Don't Know

c) Being robbed or having your home burglarized?
- ☐ Yes
- ☐ No
- ☐ Don't Know

d) Something valuable being stolen or lost?
- ☐ Yes
- ☐ No
- ☐ Don't Know

e) The death of anyone close to you?
- ☐ Yes
- ☐ No
- ☐ Don't Know

f) A separation from your spouse or partner because of marital difficulties?
- ☐ Yes
- ☐ No
- ☐ Don't Know

g) The break up of any other close relationship?
- ☐ Yes
- ☐ No
- ☐ Don't Know

h) Being fired from your job?
- ☐ Yes
- ☐ No
- ☐ Don't Know

i) Retiring from a job when you did not want to?
- ☐ Yes
- ☐ No
- ☐ Don't Know

j) Losing your job for some other reason?
- ☐ Yes
- ☐ No
- ☐ Don't Know

k) Unsuccessfully searching for a new job for more than a one month?
- ☐ Yes
- ☐ No
- ☐ Don't Know

l) Are you in a major financial crisis?
- ☐ Yes
- ☐ No
- ☐ Don't Know

m) Problems with the police?
- ☐ Yes
- ☐ No
- ☐ Don't Know

n) Did someone very close to you have a serious illness, injury, physical attack or assault?
- ☐ Yes
- ☐ No
- ☐ Don't Know

In the past 12 months, did you have serious ongoing disagreements or problems getting along with…

a) Any family members or relatives?
- ☐ Yes
- ☐ No
- ☐ Don't Know

b) Any close friend?
- ☐ Yes
- ☐ No
- ☐ Don't Know

c) Anyone at work?
- ☐ Yes
- ☐ No
- ☐ Don't Know

IPV (Interpersonal Violence) QUESTIONNAIRE

1. Have you ever been hit, slapped, kicked or otherwise physically hurt by your current or previous intimate partner? (boyfriend, ex-boyfriend, husband or ex-husband)?

   ☐ Often
   ☐ Sometimes
   ☐ Never
   When was the most recent incident? _____

2. Has a current/previous intimate partner ever forced you to engage in sexual activities against your will?

   ☐ Often
   ☐ Sometimes
   ☐ Never
   When was the most recent incident? _____

3. Have you ever been emotionally abused by your current/previous intimate partner? (e.g. humiliated, degraded, insulted, criticised, blamed)

   ☐ Often
   ☐ Sometimes
   ☐ Never
   When was the most recent incident? _____

4. SINCE YOU'VE BEEN PREGNANT, have you been hit, slapped, kicked, or otherwise physically hurt by your current/previous intimate partner?

   ☐ Often
   ☐ Sometimes
   ☐ Never
   When was the most recent incident? _____

5. SINCE YOU'VE BEEN PREGNANT, has your current/previous partner forced you to engage in sexual activities against your will?

   ☐ Often
   ☐ Sometimes
   ☐ Never
   When was the most recent incident? _____

6. Has the physical and/or sexual violence increased in severity or frequency over the past year?
   ☐ YES
   ☐ NO

7. Are you afraid of your current/previous intimate partner?
   ☐ YES
   ☐ NO

8. Has your current/previous intimate partner ever pressured you to become pregnant against your will?
   ☐ Often
   ☐ Sometimes
   ☐ Never
   When was the most recent incident? _____

   If YES to the above: Did your partner do any of the following:
   - Damage condoms? ☐ YES ☐ NO
   - Destroy your contraceptives? ☐ YES ☐ NO
   - Refuse the use of condoms/contraceptives? ☐ YES ☐ NO

9. Do you worry about being able to protect yourself from HIV and other sexually transmitted infections within your current intimate relationship?
   ☐ YES
   ☐ NO

Childhood Trauma Questionnaire (CTQ-SF) (Bernstein et al., 1994)

Instructions: These questions ask about some of your experiences growing up **as a child and a teenager**. For each question, circle the number that best describes how you feel. Although some of these questions are of a personal nature, please try to answer as honestly as you can. Your answers will be kept confidential.

When I was growing up…..	**Never True**	**Rarely True**	**Sometimes**	**Often True**	**Very Often**
1. I didn't have enough to eat.	**1**	**2**	**3**	**4**	**5**
2. I knew there was someone to take care of me and protect me	**1**	**2**	**3**	**4**	**5**
3. People in my family called me things like "stupid", "lazy", or "ugly".	**1**	**2**	**3**	**4**	**5**
4. My parents were too drunk or high to take care of me.	**1**	**2**	**3**	**4**	**5**
5. There was someone in my family who helped me feel important or special.	**1**	**2**	**3**	**4**	**5**
6. I had to wear dirty clothes.	**1**	**2**	**3**	**4**	**5**
7. I felt loved.	**1**	**2**	**3**	**4**	**5**
8. I thought that my parents wished I had never been born.	**1**	**2**	**3**	**4**	**5**
9. I got hit so hard by someone in my family that I had to see a doctor or go to the hospital.	**1**	**2**	**3**	**4**	**5**
10. There was nothing I wanted to change about my family.	**1**	**2**	**3**	**4**	**5**
11. People in my family hit me so hard that it left bruises or marks.	**1**	**2**	**3**	**4**	**5**
12. I was punished with a belt, a board, a cord, or some hard object.	**1**	**2**	**3**	**4**	**5**
13. People in my family looked out for each other.	**1**	**2**	**3**	**4**	**5**
14. People in my family said hurtful or insulting things to me.	**1**	**2**	**3**	**4**	**5**
15. I believe that I was physically abused.	**1**	**2**	**3**	**4**	**5**
16. I had the perfect childhood.	**1**	**2**	**3**	**4**	**5**
17. I got hit or beaten so badly that it was noticed by someone like a teacher, neighbour, or doctor.	**1**	**2**	**3**	**4**	**5**
18. I felt that someone in my family hated me.	**1**	**2**	**3**	**4**	**5**
19. People in my family felt close to each other.	**1**	**2**	**3**	**4**	**5**
20. Someone tried to touch me in a sexual way, or tried to make me touch them.	**1**	**2**	**3**	**4**	**5**
21. Someone threatened to hurt me or tell lies about me unless I did something sexual with them.	**1**	**2**	**3**	**4**	**5**
22. I had the best family in the world.	**1**	**2**	**3**	**4**	**5**
23. Someone tried to make me do sexual things or make me watch sexual things.	**1**	**2**	**3**	**4**	**5**
24. Someone molested me.	**1**	**2**	**3**	**4**	**5**
25. I believe that I was emotionally abused.	**1**	**2**	**3**	**4**	**5**
26. There was someone to take me to the doctor if I needed it.	**1**	**2**	**3**	**4**	**5**
27. I believe that I was sexually abused	**1**	**2**	**3**	**4**	**5**
28. My family was a source of strength and support.	**1**	**2**	**3**	**4**	**5**

Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet et al., 1988)

People sometimes look to others for companionship, assistance, or other types of support.

We are interested in how you feel about the following statements. I will read each statement carefully. Indicate how you feel about each statement.

		Very Strongly Disagree	Strongly Disagree	Mildly Disagree	Neutral	Mildly Agree	Strongly Agree	Very Strongly Agree	
1.	There is a special person who is around when I am in need.	1	2	3	4	5	6	7	SO
2.	There is a special person with whom I can share my joys and sorrows.	1	2	3	4	5	6	7	SO
3.	My family really tries to help me.	1	2	3	4	5	6	7	Fam
4.	I get the emotional help and support I need from my family.	1	2	3	4	5	6	7	Fam
5.	I have a special person who is a real source of comfort to me.	1	2	3	4	5	6	7	SO
6.	My friends really try to help me.	1	2	3	4	5	6	7	Fri
7.	I can count on my friends when things go wrong.	1	2	3	4	5	6	7	Fri
8.	I can talk about my problems with my family.	1	2	3	4	5	6	7	Fam
9.	I have friends with whom I can share my joys and sorrows.	1	2	3	4	5	6	7	Fri
10.	There is a special person in my life who cares about my feelings.	1	2	3	4	5	6	7	SO
11.	My family is willing to help me make decisions.	1	2	3	4	5	6	7	Fam
12.	I can talk about my problems with my friends.	1	2	3	4	5	6	7	Fri

Participant interview schedule

What did you find most useful/helpful about the PST sessions?

_____

_____

_____

What did you find least useful / helpful about the sessions?

_____

_____

_____

If you felt you needed it, would you attend a similar programme again in the future? Y / N

Why / why not?

_____

_____

If you had a friend who was having problems, would you recommend the counselling / PST to her? Y/N

Why / why not?

_____

_____

If applicable, reasons for no longer attending?

1 I did not have money for transport to get to sessions
2 I had other commitments and could not come (e.g. work, school, responsibilities at home)
3 I didn't feel it was helpful to me / I didn't want to come
4 I would prefer to speak to someone else (like a friend, pastor/imam, family member)
5 My problems got better and I didn't need to come anymore

Any recommendations about how the programme could be changed to improve it in the future?

_____

_____

Appendix V

Materials and measures used to collect data for Chapter 6's study:

Role-player feasibility and acceptability

UNIVERSITY OF CAPE TOWN

Department of Psychiatry and Mental Health

J Block Groote Schuur Hospital
Observatory , Cape Town
Tel: 021-4042137
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PARTICIPANT CONSENT FORM

Project Title: Stakeholders' perceptions of the feasibility and acceptability of the counselling intervention for women who present at the MOU with antenatal depression.

Overview of Study:
We are conducting a research project that will investigate the feasibility and acceptability of a counselling intervention provided to pregnant women who attend the Mitchell's Plain Maternity and Obstetrics Unit for antenatal care and are screened as being at-risk or suffering from depression. As a stakeholder / role-player, the information that you can provide us with will help us develop and evaluate the programme. This interview will take approximately 30 minutes of your time. ***The study has been approved by the University of Cape Town's Faculty of Health Sciences Human Research Ethics Committee.***

If you decide to participate in this research:

1) We would like you to answer the questions as honestly as possible.
2) Your answers are completely private. Only the main researcher will see the answers you provide, and you will not be identified at any stage of the research. Your name and personal details will not be used. Your completed questionnaire will be stored in a locked room
3) You can choose not to answer any questions that you do not like
4) If you choose not to participate, there will be no bad feelings towards you.

Who to contact:
If you have any questions about your rights as a participant, concerns or complaints, contact Maxine Spedding, maxinespedding@vodamail.co.za or 082 929 0184. ***You are also free to contact the Faculty of Health Sciences Human Research Ethics Committee by telephone: (021) 406 6492; fax: (021) 406 6411; or e-mail: sumaya.ariefdien@uct.ac.za. Their offices are located on Floor E52, Room 23 in the Old Main Building of Groote Schuur Hospital, Observatory, 7925.***

Consent Statement:
I have read or been read the consent form for this study. I have been given enough time to consider the above information and to ask advice if necessary. If have had the opportunity to ask questions that have been answered to my satisfaction. I am voluntarily agreeing to participate in the study by signing this form.

_____	_____	_____
Name of Participant	**Signature**	**Date**

INTERVIEW SCHEDULE:

STAKEHOLDERS' AND STAKEHOLDERS' PERCEPTIONS OF THE FEASIBILITY AND ACCEPTIBILITY OF THE ANTENATAL DEPRESSION SCREENING AND PST COUNSELLING INTERVENTION

Thank you for agreeing to participate in this interview. You have been identified as a key role-player / stakeholder in the screening and intervention for pregnant women at the Mitchell's Plain Midwife and Obstetrics Unit (MOU). As such, we would like to know about your experience of the programme and what you think of it. Please be as honest as possible.

Please can you tell me what your understanding is of the programme and how it worked?

What do you understand about the purpose of the programme?

Did you feel like you received enough information about the programme?

What did you think of the programme's screening and referral process?

Did you think that the programme worked for the patients? In what ways?

Is there anything that you thought worked well about the programme? Please tell me more?

Is there anything that did not work? If so, could you please tell me what you think was problematic and why you think it was problematic?

How do you think we could improve the programme? What would you do differently?

Did the programme impact on your work at all? If so, in what ways?

Did the programme made your work easier or more challenging? In what ways?

Did you feel satisfied by the number and content of meetings held to discuss the programme?

Is there anything else that you would like to say about the programme?

Thank you for your time.